Units of Weight and Measure

(United States Customary and Metric)

Definitions and Tables of Equivalents

United States Department of Commerce

National Bureau of Standards

Miscellaneous Publication 233

THE NATIONAL BUREAU OF STANDARDS

Functions and Activities

The functions of the National Bureau of Standards are set forth in the Act of Congress, March 3, 1901, as amended by Congress in Public Law 619, 1950. These include the development and maintenance of the national standards of measurement and the provision of means and methods for making measurements consistent with these standards; the determination of physical constants and properties of materials; the development of methods and instruments for testing materials, devices, and structures; advisory services to government agencies on scientific and technical problems; invention and development of devices to serve special needs of the Government; and the development of standard practices, codes, and specifications. The work includes basic and applied research, development, engineering, instrumentation, testing, evaluation, calibration services, and various consultation and information services. Research projects are also performed for other government agencies when the work relates to and supplements the basic program of the Bureau or when the Bureau's unique competence is required. The scope of activities is suggested by the listing of divisions and sections on the inside of the back cover.

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Errata to accompany National Bureau of Standards Miscellaneous Publication 233, Units of Weight and Measure--Definitions and Tables of Equivalents

Page 8, Section 6.2.

Equivalent of 1 square rod is 272.25 square feet.

Page 10, Section 6.6.

Equivalent of 1 apothecary or troy pound is 5,760 grains.

Equivalent of 1 kilogram is 15 432.36 grains.

Page 10, Section 6.7.

Correct spelling: Avoirdupois (3 instances).

Page 17, Section 8.5.

Correct to read:

Velocity

1 foot per second = 0.3048 meter per second

1 foot per second = 0.3048 x 60 meter per minute

1 foot per minute = $\frac{0.3048}{60}$ meters per second

(See appropriate length conversion tables)

Acceleration

1 foot per second per second = 0.3048 meter per second per second

1 foot per second per second = 0.3048 x 60 x 60 meter per minute per minute

1 foot per minute per minute = $\frac{0.3048}{60 \times 60}$ meters per second per second

(See appropriate length conversion tables)

December 18, 1961

US COMM-NBS-DC

UNITED STATES DEPARTMENT OF COMMERCE · Frederick H. Mueller, *Secretary*
NATIONAL BUREAU OF STANDARDS · A. V. Astin, *Director*

Units of Weight and Measure

(United States Customary and Metric)

Definitions and Tables of Equivalents

National Bureau of Standards Miscellaneous Publication 233

Issued December 20, 1960

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Units of Weight and Measure

(United States Customary and Metric)

Definitions and Tables of Equivalents

L. V. Judson

The units of length, area, volume, capacity, and mass in the United States are defined. Tables of interrelation and tables of equivalents for these units in the metric system and in the U.S. customary system are given. All values in the text and in the tables have been revised to be in accord with the Federal Register announcement of July 1, 1959, an announcement entitled "Refinement of Values for the Yard and Pound" in accordance with an agreement among the directors of National Standards Laboratories of English-speaking nations to obtain uniformity in precise measurements involving the yard and the pound. The long tables were all recomputed on an automatic computer and printer. Material on the status of the metric system in the United States was deleted as not being germane to the the main purpose of the publication. The tables showing interrelation (1 to 999 units) between bushels and hectoliters were deleted. A more complete table (0.01 to 19.99 units) showing equivalents of inches in millimeters has been added. This is a revision of Miscellaneous Publications 214.

1. INTRODUCTION

This publication supersedes National Bureau of Standards Miscellaneous Publication 214, issued in 1955. Refinements in the definition of U.S. customary units of length and mass that became effective July 1, 1959 made it desirable to prepare a new publication giving these revised definitions and the revised tables of equivalents based on them. Two tables that were probably very little used were deleted and several new tables were added.

In the construction of the tables in this publication, when the fundamental relation of the units furnished directly a reduction factor for use in determining the multiples of the units, this factor was used in its fundamental form, as for example, that 1 yard = 0.9144 meter. Reduction factors which it was necessary to obtain, however, by multiplication, division, powers, or roots, etc., of the fundamental relations were usually carried out to a greater degree of accuracy than that to which it is usually possible to make measurements, for convenience in computing the multiples to the accuracy desired.

When the tables do not give the equivalent of any desired quantity directly and completely, the equivalent can usually be obtained, without the necessity of making a multiplication of these reduction factors, by using quantities from several tables, making a shift of decimal points, if necessary, and merely adding the results. Thus, if the equivalent of 24 751 feet, 7¾ inches is required, one proceeds as follows:

24 700 feet = 100 × 247 feet =	7 528.560 meter	(page 28)
51 feet =	15.545 meter	(page 29)
7 inches = 177.8 millimeters =	0.178 meter	(page 12)
¾ inch = 19.050 millimeters =	0.019 meter	(page 15)
24 751 feet, 7¾ inches =	7 544.302 meter	

The supplementary metric units are formed by combining the words "meter", "gram", and "liter" with numerical prefixes, as in the following table:

Prefixes	Meaning		Units
pico- *one trillionth*	$\frac{1}{1\ 000\ 000\ 000\ 000}$	0.000 000 000 001	
nano- *one billionth*	$\frac{1}{1\ 000\ 000\ 000}$	0.000 000 001	
micro- = *one millionth*	$\frac{1}{1\ 000\ 000}$	0.000 001	
milli- = *one thousandth*	$\frac{1}{1\ 000}$	0.001	
centi- = *one hundredth*	$\frac{1}{100}$	0.01	
deci- = *one tenth*	$\frac{1}{10}$	0.1	"meter" *for length*
Unit = *one*		1	
deka- = *ten*	$\frac{10}{1}$	10	"gram" *for weight or mass.*
hecto- = *one hundred*	$\frac{100}{1}$	100	
kilo- = *one thousand*	$\frac{1\ 000}{1}$	1 000	"liter" *for capacity*
mega- = *one million*	$\frac{1\ 000\ 000}{1}$	1 000 000	
giga- = *one billion*	$\frac{1\ 000\ 000\ 000}{1}$	1 000 000 000	
tera- = *one trillion*	$\frac{1\ 000\ 000\ 000\ 000}{1}$	1 000 000 000 000	

Not all of the 36 possible combinations of the above prefixes and units are in common use; for example the dekameter and the hectometer are seldom found except in text books. The first two and the last two of these prefixes are of recent origin. The word "micron" is usually used instead of "micrometer".

All lengths, areas, and cubic measures in the following tables are derived from the international meter, the basic relation between units of the United States customary and the metric systems being:

$$1 \text{ U.S. yard} = 0.9144 \text{ meter.}$$

Any data expressed in feet derived from and published as a result of geodetic surveys within the United States will continue to bear the following relationship as defined in 1893:

$$1 \text{ foot} = \frac{1200}{3937} \text{ meter.}$$

The foot unit defined by this equation is referred to as the U.S. Survey Foot. *No tables involving this unit are included in this publication.*

All capacities are based on the equivalent 1 liter equals 1.000 028 cubic decimeters.[1] The decimeter is equal to approximately 3.937 007 9 inches in accordance with the legal equivalent of the yard given above. The gallon referred to in the tables is the United States gallon

[1] Formerly this relation was given as 1 liter = 1.000 027 cubic decimeters. See Guillaume, La Creation du Bureau International des Poids et Mesure et son Oeuvre, Paris, 1927, pages 256 to 258, for reasons for the change.

of 231 cubic inches. The bushel is the United States bushel of 2 150.42 cubic inches. These units must not be confused with the British units of the same name which differ from those used in the United States. The British gallon (277.42 cubic inches) is approximately 20 percent larger, and the British bushel (2 219.36 cubic inches) is 3 percent larger than the corresponding units used in this country.

All weights are derived from the International Kilogram, as authorized in the Mendenhall Order of April 5, 1893.[2] The relation used is 1 avoirdupois pound = 453.592 37 grams.[3]

2. FUNDAMENTAL EQUIVALENTS

In its original conception the meter was the fundamental unit of the metric system, and all units of length and capacity were to be derived directly from the meter which was intended to be equal to one ten-millionth of the earth's quandrant. Furthermore, it was originally planned that the unit of mass, the kilogram, should be identical with the mass of a cubic decimeter of water at its maximum density. At present, however, the units of length and mass are defined independently of these conceptions.

In October 1960, it was agreed at the Eleventh General (International) Conference on Weights and Measures to redefine the meter in terms of the wavelength of the orange-red radiation in vacuum of krypton 86 corresponding to the unperturbed transition between the $2p_{10}$ and $5d_5$ levels as follows:

1 meter = 1 650 763.73 wavelengths.

This corresponds to a wavelength (krypton 86 orange-red) of

6 057.802 1 $\times 10^{-7}$ millimeter.

Thus, as for more than 150 years, the meter bears no definite relation to the earth's quadrant. From the time of the adoption of the International Prototype Meter in 1889, the meter had been defined in terms of that standard, a platinum-iridium bar kept at the International Bureau of Weights and Measures in Sèvres, France, a suburb of Paris. At the Seventh General Conference in 1927 a supplementary relation between the meter and the wavelength of light was adopted. This relation for red cadmium light waves under specified conditions of temperature, pressure, and humidity was: 1 meter = 1 553 164.13 wavelengths. This corresponds to a wavelength (cadmium red) of 6 438.469 6 $\times 10^{-7}$ millimeter. The number of wavelengths of the krypton 86 radiation in one meter, 1 650 763.73, was obtained by comparing interferometrically orange-red krypton 86 radiation with the red cadmium radiation.

The kilogram is independently defined as the mass of a definite platinum-iridium standard, the International Prototype Kilogram, which is also kept at the International Bureau of Weights and Measures. The liter is defined as the volume of a kilogram of water, at standard atmospheric pressure, and at the temperature of its maximum density, approximately 4°C. The meter is thus a unit on which is based all metric standards and measurements of length and area, and of volume derived from linear measurements.

The kilogram is the unit on which are based all metric standards of mass. The liter is a derived unit of capacity or volume. The liter is larger by about 28 parts per million than the cube of the tenth of the meter, i. e., the cubic decimeter—that is, 1 liter = 1.000 028 cubic decimeters.

3. DEFINITIONS OF UNITS

3.1. LENGTH

Fundamental Units

A meter (m) is a unit of length equal to 1 650 763.73 times the wavelength of the orange-red radiation of krypton 86 under specified conditions.

A yard (yd) is a unit of length equal to 0.914 4 meter.

[2] U. S. Coast and Geodetic Survey Bulletin 26, Apr. 5, 1893.
[3] Federal Register, July 1, 1959.
[4] J. R. Benoit, C. Fabry, and A. Perot, Nouvelle détermination du rapport des longuers d'onde fondamentales aves l'unité métrique. Trav. et Mém. Bur. Int. Poids et Mesures 15, 131 (1913).

Multiples and Submultiples

1 kilometer (km) = 1 000 meters.
1 hectometer (hm) = 100 meters.
1 dekameter (dkm) = 10 meters.
1 decimeter (dm) = 0.1 meter.
1 centimeter (cm) = 0.01 meter.
1 millimeter (mm) = 0.001 meter.
1 micron (μ) = 0.000 001 meter = 0.001 millimeter.
1 millimicron (mμ) = 0.000 000 001 meter = 0.001 micron.
1 angstrom (A) { = 0.000 000 1 millimeter.[5]
= .000 1 micron.
= .1 millimicron.
1 statute mile { = 8 furlongs = 320 rods.
= 1 760 yards = 5 280 feet.
1 furlong = $\frac{1}{8}$ mile = 40 rods = 220 yards = 660 feet.
1 rod = $5\frac{1}{2}$ yards = $16\frac{1}{2}$ feet = 25 links.
1 foot = $\frac{1}{3}$ yard = 12 inches.
1 hand = 4 inches.
1 inch = $\frac{1}{36}$ yard = $\frac{1}{12}$ foot.
1 line (button) = $\frac{1}{40}$ inch.
1 point (printers) = 0.013 837 inch = $\frac{1}{72}$ inch (nearly).
1 mil = $\frac{1}{1000}$ inch.
1 chain (Gunter's) = 4 rods = 22 yards = 66 feet = 100 links.
1 link (Gunter's) = $\frac{1}{100}$ chain = 7.92 inches.
1 international nautical mile = 1 852 meters = 6 076.115 49 feet (approximately).[6]
1 fathom = 6 feet = 8 spans.
1 span = $\frac{1}{8}$ fathom = 9 inches.

3.2. AREA

Fundamental Units

A square meter (m^2) is a unit of area equal to the area of a square the sides of which are 1 meter.

A square yard (yd^2) is a unit of area equal to the area of a square the sides of which are 1 yard.

Multiples and Submultiples

1 square kilometer (km^2) = 1 000 000 square meters.
1 hectare (ha), or square hectometer (hm^2) = 10 000 square meters.
1 are (a), or square dekameter (dkm^2) = 100 square meters.
1 centare (ca) = 1 square meter.
1 square decimeter (dm^2) = 0.01 square meter.
1 square centimeter (cm^2) = 0.000 1 square meter.
1 square millimeter (mm^2) = 0.000 001 square meter.
1 square mile (mi^2) { = 640 acres = 102 400 square rods.
= 3 097 600 square yards = 27 878 400 square feet.
1 acre (acre) = 10 square chains { = 160 square rods = 4 840 square yards.
= 43 560 square feet.
1 square chain (ch^2) { = 16 square rods = 484 square yards = 4 356 square feet.
= 10 000 square links.
1 square link (li^2) { = 0.000 1 square chain = 0.048 4 square yard.
= 0.435 6 square foot = 62.726 4 square inches.

[5] The angstrom is defined basically as the unit such that 6 438.469 6 of these units equal the wavelength of the red radiation of cadmium under specified conditions.
[6] Prior to July 1, 1954 the U.S. nautical mile of 1 853.248 meters = 6 080.20 feet was in use in this country.

1 square rod (rd^2) = 30.25 square yards = 272.27 square feet = 625 square links.
1 square foot (ft^2) = $\frac{1}{9}$ square yard = 144 square inches.
1 square inch (in.^{2}) = $\frac{1}{1296}$ square yard = $\frac{1}{144}$ square foot.

3.3. VOLUME

Fundamental Units

A cubic meter (m^3) is a unit of volume equal to a cube the edges of which are 1 meter.
A cubic yard (yd^3) is a unit of volume equal to a cube the edges of which are 1 yard.

Multiples and Submultiples

1 cubic kilometer (km^3) = 1 000 000 000 cubic meters.
1 cubic hectometer (hm^3) = 1 000 000 cubic meters.
1 cubic dekameter (dkm^3) = 1 000 cubic meters.
1 stere (s) = 1 cubic meter.
1 cubic decimeter (dm^3) = 0.001 cubic meter.
1 cubic centimeter (cm^3) = 0.000 001 cubic meter = 0.001 cubic decimeter.
1 cubic millimeter (mm^3) = 0.000 000 001 cubic meter = 0.001 cubic centimeter.
1 cubic foot (ft^3) = $\frac{1}{27}$ cubic yard.
1 cubic inch (in.^{3}) = $\frac{1}{46656}$ cubic yard = $\frac{1}{1728}$ cubic foot.
1 board foot (fbm) = 144 cubic inches = $\frac{1}{12}$ cubic foot.
1 cord (cd) = 128 cubic feet.

3.4. CAPACITY

Fundamental Units

A liter (liter) is a unit of capacity equal to the volume occupied by 1 kilogram of pure water at its maximum density (at a temperature of 4° C, practically) and under the standard atmospheric pressure (of 760 mm). It is equivalent in volume to 1.000 028 cubic decimeters.

A gallon (gal) is a unit of capacity equal to the volume of 231 cubic inches. It is used for the measurement of liquid commodities only.

A bushel (bu) is a unit of capacity equal to the volume of 2 150.42 cubic inches. It is used in the measurement of dry commodities only.[7]

Multiples and Submultiples

1 hectoliter (hl) = 100 liters.
1 dekaliter (dkl) = 10 liters.
1 deciliter (dl) = 0.1 liter.
1 centiliter (cl) = 0.01 liter.
1 milliliter (ml) = 0.001 liter = 1.000 028 cubic centimeters.
1 liquid quart (liq qt) = $\frac{1}{4}$ gallon = 57.75 cubic inches.
1 liquid pint (liq pt) = $\frac{1}{8}$ gallon = $\frac{1}{2}$ liquid quart = 28.875 cubic inches.
1 gill (gi) = $\frac{1}{32}$ gallon = $\frac{1}{4}$ liquid pint = 7.218 75 cubic inches.
1 fluid ounce (fl oz) = $\frac{1}{128}$ gallon = $\frac{1}{16}$ liquid pint.
1 fluid dram (fl dr) = $\frac{1}{8}$ fluid ounce = $\frac{1}{128}$ liquid pint.
1 minim (min *or* ♏) = $\frac{1}{60}$ fluid dram = $\frac{1}{480}$ fluid ounce.
1 peck (pk) = $\frac{1}{4}$ bushel = 537.605 cubic inches.
1 dry quart (dry qt) = $\frac{1}{32}$ bushel = $\frac{1}{8}$ peck = 67.200 625 cubic inches.
1 dry pint (dry pt) = $\frac{1}{64}$ bushel = $\frac{1}{2}$ dry quart = 33.600 312 5 cubic inches.
1 barrel, for fruits, vegetables, and other dry commodities, other than cranberries,[8] = 7 056 cubic inches = 105 dry quarts.
1 barrel for cranberries = 5 826 cubic inches.[9]

[7] This is the so-called stricken or struck bushel. A heaped bushel for apples of 2 747.715 cubic inches was established by the U. S Court of Customs Appeals on Feb. 15, 1912, in United States *v.* Weber (no. 757). A heaped bushel, equivalent to 1¼ stricken bushels is also recognized.
[8] As fixed by United States standard barrel act (United States Code, title 15, ch. 6, sec. 234).
[9] As computed from dimensions fixed by United States standard barrel act, see above.

Fundamental Units

A kilogram (kg) is a unit of mass equal to the mass of the International Prototype Kilogram.

A gram (g) is a unit of mass equal to one-thousandth of the mass of the International Prototype Kilogram.

An avoirdupois pound (lb avdp) is a unit of mass equal to 0.453 592 37 kilogram.

A troy pound (lb t) is a unit of mass equal to $\frac{5760}{7000}$ of that of the avoirdupois pound.

Multiples and Submultiples

1 metric ton (t) = 1 000 kilograms.
1 hectogram (hg) = 100 grams.
1 dekagram (dkg) = 10 grams.
1 decigram (dg) = 0.1 gram.
1 centigram (cg) = 0.01 gram.
1 milligram (mg) = 0.001 gram.
1 metric carat[10] (c) = 200 milligrams = 0.2 gram.
1 avoirdupois ounce (oz avdp) = $\frac{1}{16}$ avoirdupois pound = 437.5 grains.
1 avoirdupois dram (dr avdp) = $\frac{1}{256}$ avoirdupois pound = $\frac{1}{16}$ avoirdupois ounce.
1 grain (grain) = $\frac{1}{7000}$ avoirdupois pound = $\frac{1}{5760}$ troy pound.
1 apothecaries pound (lb ap) = 1 troy pound = $\frac{5760}{7000}$ avoirdupois pound.
1 apothecaries or troy ounce (oz ap *or* ℥, oz t) = $\frac{1}{12}$ troy pound = $\frac{480}{7000}$ avoirdupois pound = 480 grains.
1 apothecaries dram (dr ap *or* ʒ) = $\frac{1}{96}$ apothecaries pound = $\frac{1}{8}$ apothecaries ounce = 60 grains.
1 pennyweight (dwt) = $\frac{1}{20}$ troy ounce = 24 grains.
1 apothecaries scruple (s ap *or* ℈) = $\frac{1}{3}$ apothecaries dram = 20 grains.
1 short hundredweight (sh cwt) = 100 avoirdupois pounds.
1 long hundredweight = 112 avoirdupois pounds.
1 short ton = 2 000 avoirdupois pounds.
1 long ton = 2 240 avoirdupois pounds.

4. UNITS AND STANDARDS

Units of measurement and standards of measurement must be carefully distinguished.

A *unit* is a value, quantity, or magnitude in terms of which other values, quantities, or magnitude are expressed. In general a unit is fixed by definition and is independent of such physical conditions as temperature. This publication is concerned with the units of weights and measures used in the United States, especially with the numerical relations among various units.

A *standard* is the physical embodiment of a unit. In general a standard is not independent of physical conditions and is the true embodiment of the unit only under specified conditions. For example, a yard standard has a length of one yard only when at one particular temperature and when supported in a certain manner. If supported in a different manner, the standard would have to be at a different temperature in order to have a length of exactly one yard.

Some standards are fundamental in their character, and units are defined in terms of these standards. Such standards must be relatively stable in dimensions and other characteristics over long periods of time. The definitions of the units in terms of these standards

[10] See National Bureau of Standards Circular C43, The Metric Carat, for a discussion of the metric carat and tables of the relations of the metric carat to the old carat of 205.3 milligrams in use in this country previous to July 1, 1913.

must be very specific. Such a standard is the International Prototype Meter. Different orders of accuracy and importance, are assigned to other standards such as national standards, scientific laboratory standards, and manufacturers' standards.

Information about suitable standards of weights and measures for specific purposes and about calibration of such standards by the National Bureau of Standards can be found in other publications of the Bureau or may be obtained directly from the Bureau.

5. SPELLING AND ABBREVIATION OF UNITS

The spelling of the names of units as adopted by the National Bureau of Standards is that given in the list below. The spelling of the metric units is in accordance with that given in the law of July 28, 1866, legalizing the metric system in the United States.

Following the name of each unit in the list below is given the abbreviation which the Bureau has adopted. Attention is particularly called to the following principles:

1. The period is omitted after all abbreviations of units, except where the abbreviation forms an English word.

2. The exponents "^{2}" and "^{3}" are used to signify "square" and "cubic", respectively, instead of the abbreviations "sq" or "cu", which are, however, frequently used in technical literature for the United States customary units. In conformity with this principle the abbreviation for cubic centimeter is "cm^3" (instead of "cc" or "c cm"). The term "cubic centimeter", as used in chemical work, is, in fact, a misnomer, since the unit actually used is the "milliliter", of which the correct abbreviation is "ml" (see p. 1).

3. The use of the same abbreviation for both singular and plural is recommended. This practice is already established in expressing metric units and is in accordance with the spirit and chief purpose of abbreviations.

4. It is also suggested that, unless all the text is printed in capital letters, only small letters be used for abbreviations, except in such case as, A for angstrom, etc., where the use of capital letters is general.

5.1. LIST OF THE MOST COMMON UNITS OF WEIGHT AND MEASURE AND THEIR ABBREVIATIONS

Unit	Abbreviation	Unit	Abbreviation	Unit	Abbreviation
acre	acre	dram, avoirdupois	dr avdp	ounce, apothecaries	oz ap *or* ℥
angstrom	A	dram, fluid	fl dr	ounce, avoirdupois	oz avdp
are	a	fathom	fath	ounce, fluid	fl oz
avoirdupois	avdp	foot	ft	ounce, troy	oz t
barrel	bbl	furlong	fur.	peck	pk
board foot	fbm	gallon	gal	pennyweight	dwt
bushel	bu	grain	grain	pint	pt
carat	c	gram	g	pound	lb
centare	ca	hectare	ha	pound, apothecaries	lb ap
centigram	cg	hectogram	hg	pound, avoirdupois	lb avdp
centiliter	cl	hectoliter	hl	pound, troy	lb t
centimeter	cm	hectometer	hm	quart	qt
chain	ch	hogshead	hhd	rod	rd
cubic centimeter	cm^3	hundredweight	cwt	scruple, apothecaries	s ap *or* ℈
cubic decimeter	dm^3	inch	in.	square centimeter	cm^2
cubic dekameter	dkm^3	kilogram	kg	square chain	ch^2
cubic foot	ft^3	kiloliter	kl	square decimeter	dm^2
cubic hectometer	hm^3	kilometer	km	square dekameter	dkm^2
cubic inch	$in.^3$	link	li	square foot	ft^2
cubic kilometer	km^3	liquid	liq	square hectometer	hm^2
cubic meter	m^3	liter	liter	square inch	$in.^2$
cubic mile	mi^3	meter	m	square kilometer	km^2
cubic millimeter	mm^3	metric ton	t	square link	li^2
cubic yard	yd^3	microgram*	μg	square meter	m^2
decigram	dg	microinch	μin.	square mile	mi^2
deciliter	dl	microliter*	μl	square millimeter	mm^2
decimeter	dm	micron	μ	square rod	rd^2
decistere	ds	mile	mi	square yard	yd^2
dekagram	dkg	milligram	mg	stere	s
dekaliter	dkl	milliliter	ml	ton	ton
dekameter	dkm	millimeter	mm	ton, metric	t
dekastere	dks	millimicron	mμ	troy	t
dram	dr	minim	min *or* ♏	yard	yd
dram, apothecaries	dr ap *or* ℨ	ounce	oz		

* The abbreviations γ and λ for microgram and microliter, respectively, have been advocated by some authorities.

6. TABLES OF INTERRELATIC

6.1. UNITS

Units	Inches	Links	Feet	Yards	Rods
1 inch =	1	0.126 262 6	0.083 333 33	0.027 777 78	0.005 050 505
1 link =	7.92	1	0.66	0.22	0.04
1 foot =	12	1.515 152	1	0.333 333 3	0.060 606 06
1 yard =	36	4 545 45	3	1	0.181 818 2
1 rod =	198	25	16.5	5.5	1
1 chain =	792	100	66	22	4
1 mile =	63 360	8000	5280	1760	320
1 centimeter =	0.393 700 8	0.049 709 70	0.032 808 40	0.010 936 13	0.001 988 388
1 meter =	39.370 08	4.970 970	3.280 840	1.093 613	0.198 838 8

6.2. UNITS

	Square inches	Square links	Square feet	Square yards	Square rods	Square chains
1 square inch =	1	0.015 942 25	0.006 944 444	0.000 771 604 9	0.000 025 507 60	0.000 001 594 22
1 square link =	62.726 4	1	0.435 6	0.048 4	0.001 6	0.000 1
1 square foot =	144	2.295 684	1	0.111 111 1	0.003 673 095	0.000 229 568 4
1 square yard =	1296	20.661 16	9	1	0.033 057 85	0.002 066 116
1 square rod =	39 204	625	272.75	30.25	1	0.062 5
1 square chain =	627 264	10 000	4356	484	16	1
1 acre =	6 272 640	100 000	43 560	4840	160	10
1 square mile =	4 014 489 600	64 000 000	27 878 400	3 097 600	102 400	640
1 square centimeter =	0.155 000 3	0.002 471 054	0.001 076 391	0.000 119 599 0	0.000 003 953 686	0.000 000 247 10
1 square meter =	1550.003	24.710 54	10.763 91	1.195 990	0.039 536 86	0.002 471 054
1 hectare =	15 500 031	247 105.4	107 639.1	11 959.90	395.368 6	24.710 54

6.3. UNITS

Units	Cubic inches	Cubic feet	Cubic yards
1 cubic inch =	1	0.000 578 703 7	0.000 021 433 47
1 cubic foot =	1728	1	0.037 037 04
1 cubic yard =	46 656	27	1
1 cubic centimeter =	0.061 023 74	0.000 035 314 67	0.000 001 307 951
1 cubic decimeter =	61.023 74	0.035 314 67	0.001 307 951
1 cubic meter =	61 023.74	35.314 67	1.307 951

6.4. UNITS OF CAPACI

Units	Minims	Fluid drams	Fluid ounces	Gills	Liquid pints
1 minim =	1	0.016 666 67	0.002 083 333	0.000 520 833 3	0.000 130 208 3
1 fluid dram =	60	1	0.125	0.031 25	0.007 812 5
1 fluid ounce =	480	8	1	0.25	0.062 5
1 gill =	1920	32	4	1	0.25
1 liquid pint =	7680	128	16	4	1
1 liquid quart =	15 360	256	32	8	2
1 gallon =	61 440	1024	128	32	8
1 cubic inch =	265.974 0	4.432 900	0.554 112 6	0.138 528 1	0.034 632 03
1 cubic foot =	459 603.1	7660.052	957.506 5	239.376 6	59.844 16
1 milliliter =	16.231 19	0.270 519 8	0.033 814 97	0.008 453 742	0.002 113 436
1 liter =	16 231.19	270.519 8	33.814 97	8.453 742	2.113 436

O UNITS OF MEASUREMENT

LNGTH

Chains	Miles	Centimeters	Meters	Units
0.001 262 626	0.000 015 782 83	2.54	0.025 4	=1 inch
0.01	0.000 125	20.116 8	0.201 168	=1 link
0.015 151 52	0.000 189 393 9	30.48	0.304 8	=1 foot
0.045 454 55	0.000 568 181 8	91.44	0.914 4	=1 yard
0.25	0.003 125	502.92	5.029 2	=1 rod
1	0.012 5	2011.68	20.116 8	=1 chain
80	1	160 934.4	1609.344	=1 mile
0.000 497 097 0	0.000 006 213 712	1	0.01	=1 centimeter
0.049 709 70	0.000 621 371 2	100	1	=1 meter

AEA

Acres	Square miles	Square centimeters	Square meters	Hectares	Units
0.0 000 159 422 5	0.000 000 000 249 097 7	6.451 6	0.000 645 16	0.000 000 064 516	=1 square inch
0.0 01	0.000 000 015 625	404.685 642 24	0.040 468 564 224	0.000 004 046 856 422 4	= 1 square link
0.0 022 956 84	0.000 000 035 870 06	929.030 4	0.092 903 04	0.000 009 290 304	=1 square foot
0.0 206 611 6	0.000 000 322 830 6	8 361.273 6	0.836 127 36	0.000 083 612 736	=1 square yard
0.6 25	0.000 009 765 625	252 928.526 4	25.292 852 64	0.002 529 285 264	=1 square rod
0.	0.000 156 25	4 046 856.422 4	404.685 642 24	0.040 468 564 224	=1 square chain
1	0.001 562 5	40 468 564.224	4046.856 422 4	0.404 685 642 24	=1 acre
640	1	25 899 881 103.36	2 589 988.110 336	258.998 811 033 6	=1 square mile
0.0 000 024 710 54	0.000 000 000 038 610 22	1	0.000 1	0.000 000 01	=1 square centimeter
0.0 247 105 4	0.000 000 386 102 2	10 000	1	0.000 1	=1 square meter
2.1 054	0.003 861 022	100 000 000	10 000	1	=1 hectare

VLUME

Cubic Centimeters	Cubic decimeters	Cubic meters	Units
16.387 064	0.016 387 064	0.000 016 387 064	=1 cubic inch
28 316.846 592	28.316 846 592	0.028 316 846 592	=1 cubic foot
764 554.857 984	764.554 857 984	0.764 554 857 984	=1 cubic yard
1	0.001	0.000 001	=1 cubic centimeter
1 000	1	0.001	=1 cubic decimeter
1 000 000	1000	1	=1 cubic meter

LUID MEASURE

Liquid quarts	Gallons	Cubic inches	Cubic feet	Milliliters	Liters	Units
000 065 104 17	0.000 016 276 04	0.003 759 766	0.000 002 175 790	0.061 609 79	0.000 061 609 79	=1 minim
003 906 25	0.000 976 562 5	0.225 585 9	0.000 130 547 4	3.696 588	0.003 696 588	=1 fluid dram
031 25	0.007 812 5	1.804 687 5	0.001 044 379	29.572 70	0.029 572 70	=1 fluid ounce
125	0.031 25	7.218 75	0.004 177 517	118.290 8	0.118 290 8	=1 gill
5	0.125	28.875	0.016 710 07	473.163 2	0.473 163 2	=1 liquid pint
1	0.25	57.75	0.033 420 14	946.326 4	0.946 326 4	=1 liquid quart
4	1	231	0.133 680 6	3 785.306	3.785 306	=1 gallon
017 316 02	0.004 329 004	1	0.000 578 703 7	16.386 61	0.016 386 61	=1 cubic inch
922 08	7.480 519	1728	1	28 316.05	28.316 05	=1 cubic foot
001 056 718	0.000 264 179 4	0.061 025 45	0.000 035 315 66	1	0.001	=1 milliliter
056 718	0.264 179 4	61.025 45	0.035 315 66	1000	1	=1 liter

6. TABLES OF INTERRELATION OF UNITS OF MEASUREMENT

6.1. UNITS OF LENGTH

Units	Inches	Links	Feet	Yards	Rods
1 inch =	1	0.126 262 6	0.083 333 33	0.027 777 78	0.005 050 505
1 link =	7.92	1	0.66	0.22	0.04
1 foot =	12	1.515 152	1	0.333 333 3	0.060 606 06
1 yard =	36	4 545 45	3	1	0.181 818 2
1 rod =	198	25	16.5	5.5	1
1 chain =	792	100	66	22	4
1 mile =	63 360	8000	5280	1760	320
1 centimeter =	0.393 700 8	0.049 709 70	0.032 808 40	0.010 936 13	0.001 988 388
1 meter =	39.370 08	4.970 970	3.280 840	1.093 613	0.198 838 8

Chains	Miles	Centimeters	Meters	Units
0.001 262 626	0.000 015 782 83	2.54	0.025 4	=1 inch
0.01	0.000 125	20.116 8	0.201 168	=1 link
0.015 151 52	0.000 189 393 9	30.48	0.304 8	=1 foot
0.045 454 55	0.000 568 181 8	91.44	0.914 4	=1 yard
0.25	0.003 125	502.92	5.029 2	=1 rod
1	0.012 5	2011.68	20.116 8	=1 chain
80	1	160 934.4	1609.344	=1 mile
0.000 497 097 0	0.000 006 213 712	1	0.01	=1 centimeter
0.049 709 70	0.000 621 371 2	100	1	=1 meter

6.2. UNITS OF AREA

	Square inches	Square links	Square feet	Square yards	Square rods	Square chains
1 square inch =	1	0.015 942 25	0.006 944 444	0.000 771 604 9	0.000 025 507 60	0.000 001 594 225
1 square link =	62.726 4	1	0.435 6	0.048 4	0.001 6	0.000 1
1 square foot =	144	2.295 684	1	0.111 111 1	0.003 673 095	0.000 229 568 4
1 square yard =	1296	20.661 16	9	1	0.033 057 85	0.002 066 116
1 square rod =	39 204	625	272.75	30.25	1	0.062 5
1 square chain =	627 264	10 000	4356	484	16	1
1 acre =	6 272 640	100 000	43 560	4840	160	10
1 square mile =	4 014 489 600	64 000 000	27 878 400	3 097 600	102 400	6400
1 square centimeter =	0.155 000 3	0.002 471 054	0.001 076 391	0.000 119 599 0	0.000 003 953 686	0.000 000 247 105 4
1 square meter =	1550.003	24.710 54	10.763 91	1.195 990	0.039 536 86	0.002 471 054
1 hectare =	15 500 031	247 105.4	107 639.1	11 959.90	395.368 6	24.710 54

Acres	Square miles	Square centimeters	Square meters	Hectares	Units
0.000 000 159 422 5	0.000 000 000 249 097 7	6.451 6	0.000 645 16	0.000 000 064 516	=1 square inch
0.000 01	0.000 000 015 625	404.685 642 24	0.040 468 564 224	0.000 004 046 856 422 4	=1 square link
0.000 022 956 84	0.000 000 035 870 06	929.030 4	0.092 903 04	0.000 009 290 304	=1 square foot
0.000 206 611 6	0.000 000 322 830 6	8 361.273 6	0.836 127 36	0.000 083 612 736	=1 square yard
0.006 25	0.000 009 765 625	252 928.526 4	25.292 852 64	0.002 529 285 264	=1 square rod
0.1	0.000 156 25	4 046 856.422 4	404.685 642 24	0.040 468 564 224	=1 square chain
1	0.001 562 5	40 468 564.224	4046.856 422 4	0.404 685 642 24	=1 acre
640	1	25 899 881 103.36	2 589 988.110 336	258.998 811 033 6	=1 square mile
0.000 000 024 710 54	0.000 000 000 038 610 22	1	0.000 1	0.000 000 01	=1 square centimeter
0.000 247 105 4	0.000 000 386 102 2	10 000	1	0.000 1	=1 square meter
2.471 054	0.003 861 022	100 000 000	10 000	1	=1 hectare

6.3. UNITS OF VOLUME

Units	Cubic inches	Cubic feet	Cubic yards
1 cubic inch =	1	0.000 578 703 7	0.000 021 433 47
1 cubic foot =	1728	1	0.037 037 04
1 cubic yard =	46 656	27	1
1 cubic centimeter =	0.061 023 74	0.000 035 314 67	0.000 001 307 951
1 cubic decimeter =	61.023 74	0.035 314 67	0.001 307 951
1 cubic meter =	61 023.74	35.314 67	1.307 951

Cubic Centimeters	Cubic decimeters	Cubic meters	Units
16.387 064	0.016 387 064	0.000 016 387 064	=1 cubic inch
28 316.846 592	28.316 846 592	0.028 316 846 592	=1 cubic foot
764 554.857 984	764.554 857 984	0.764 554 857 984	=1 cubic yard
1	0.001	0.000 001	=1 cubic centimeter
1 000	1	0.001	=1 cubic decimeter
1 000 000	1000	1	=1 cubic meter

6.4. UNITS OF CAPACITY (LIQUID MEASURE)

Units	Minims	Fluid drams	Fluid ounces	Gills	Liquid pints
1 minim =	1	0.016 666 67	0.002 083 333	0.000 520 833 3	0.000 130 208 3
1 fluid dram =	60	1	0.125	0.031 25	0.007 812 5
1 fluid ounce =	480	8	1	0.25	0.062 5
1 gill =	1920	32	4	1	0.25
1 liquid pint =	7680	128	16	4	1
1 liquid quart =	15 360	256	32	8	2
1 gallon =	61 440	1024	128	32	8
1 cubic inch =	265.974 0	4.432 900	0.554 112 6	0.138 528 1	0.034 632 03
1 cubic foot =	459 603.1	7660.052	957.506 5	239.376 6	59.844 16
1 milliliter =	16.231 19	0.270 519 8	0.033 814 97	0.008 453 742	0.002 113 436
1 liter =	16 231.19	270.519 8	33.814 97	8.453 742	2.113 436

Liquid quarts	Gallons	Cubic inches	Cubic feet	Milliliters	Liters	Units
0.000 065 104 17	0.000 016 276 04	0.003 759 766	0.000 002 175 790	0.061 609 79	0.000 061 609 79	=1 minim
0.003 906 25	0.000 976 562 5	0.225 585 9	0.000 130 547 4	3.696 588	0.003 696 588	=1 fluid dram
0.031 25	0.007 812 5	1.804 687 5	0.001 044 379	29.572 70	0.029 572 70	=1 fluid ounce
0.125	0.031 25	7.218 75	0.004 177 517	118.290 8	0.118 290 8	=1 gill
0.5	0.125	28.875	0.016 710 07	473.163 2	0.473 163 2	=1 liquid pint
1	0.25	57.75	0.033 420 14	946.326 4	0.946 326 4	=1 liquid quart
4	1	231	0.133 680 6	3 785.306	3.785 306	=1 gallon
0.017 316 02	0.004 329 004	1	0.000 578 703 7	16.386 61	0.016 386 61	=1 cubic inch
29.922 08	7.480 519	1728	1	28 316.05	28.316 05	=1 cubic foot
1.001 056 718	0.000 264 179 4	0.061 025 45	0.000 035 315 66	1	0.001	=1 milliliter
1 056 718	0.264 179 4	61.025 45	0.035 315 66	1000	1	=1 liter

6.5. UNITS OF CAPACITY

Units	Dry pints	Dry quarts	Pecks	Bushels
1 dry pint =	1	0.5	0.062 5	0.015 625
1 dry quart =	2	1	0.125	0.031 25
1 peck =	16	8	1	0.25
1 bushel =	64	32	4	1
1 cubic inch =	0.029 761 6	0.014 880 8	0.001 860 10	0.000 465 025
1 cubic foot =	51.428 09	25.714 05	3.214 256	0.803 563 95
1 liter =	1.816 217	0.908 108 4	0.113 513 6	0.028 378 39
1 dekaliter =	18.162 17	9.081 084	1.135 136	0.283 783 9

6.6. UNITS OF MASS NOT GREATER

Units	Grains	Apothecaries scruples	Pennyweights	Avoirdupois drams	Apothecaries drams	Avoirdupois ounces
1 grain =	1	0.05	0.041 666 67	0.036 571 43	0.016 666 67	0.002 285 7
1 apoth scruple =	20	1	0.833 333 3	0.731 428 6	0.333 333 3	0.045 714 2
1 pennyweight =	24	1.2	1	0.877 714 3	0.4	0.054 857 14
1 avdp dram =	27.343 75	1.367 187 5	1.139 323	1	0.455 729 2	0.062 5
1 apoth dram =	60	3	2.5	2.194 286	1	0.137 142 9
1 avdp ounce =	437.5	21.875	18.229 17	16	7.291 667	1
1 apoth or troy ounce =	480	24	20	17.554 29	8	1.097 143
1 apoth or troy pound =	5.760	288	240	210.651 4	96	13.165 71
1 avdp pound =	7 000	350	291.666 7	256	116.666 7	16
1 milligram =	0.015 432 36	0.000 771 617 9	0.000 643 014 9	0.000 564 383 4	0.000 257 206 0	0.000 035 27
1 gram =	15.432 36	0.771 617 9	0.643 014 9	0.564 383 4	0.257 206 0	0.035 273 96
1 kilogram =	15 432 36	771.617 9	643.014 9	564.383 4	257.206 0	35.273 96

6.7. UNITS OF MASS NOT LESS

Units	Avourdupois ounces	Avourdupois pounds	Short hundred weights	Short tons
1 avourdupois ounce =	1	0.0625	0.000 625	0.000 031 25
1 avoirdupois pound =	16	1	0.01	0.000 5
1 short hundredweight =	1 600	100	1	0.05
1 short ton =	32 000	2 000	20	1
1 long ton =	35 840	2 240	22.4	1.12
1 kilogram =	35.273 96	2.204 623	0.022 046 23	0.001 102 311
1 metric ton =	35 273.96	2204.623	22.046 23	1.102 311

MEASURE

Cubic inches	Cubic feet	Liters	Dekaliters	Units
33.600 312 5	0.019 444 63	0.550 595 1	0.055 059 51	=1 dry pint
67.200 625	0.038 889 25	1.101 190	0.110 119 0	=1 dry quart
537.605	0.311 114	8.809 521	0.880 952 1	=1 peck
2150.42	1.244 456	35.238 08	3.523 808	=1 bushel
1	0.000 578 703 7	0.016 386 61	0.001 638 661	=1 cubic inch
1728	1	28.316 05	2.831 605	=1 cubic foot
61.025 45	0.035.315 66	1	0.1	=1 liter
610.254 5	0.353 156 6	10	1	=1 dekaliter

AN POUNDS AND KILOGRAMS

thecaries or oy ounces	Apothecaries or troy pounds	Avourdupois pounds	Milligrams	Grams	Kilograms	Units
2 083 333	0.000 173 611 1	0.000 142 857 1	64.798 91	0.064 798 91	0.000 064 798 91	=1 grain
1 666 67	0.003 472 222	0.002 857 143	1295.978 2	1.295 978 2	0.001 295 978 2	=1 apoth scruple
	0.004 166 667	0.003 428 571	1555.173 84	1.555 173 84	0.001 555 173 84	=1 pennyweight
6 966 15	0.004 747 179	0.003 906 25	1771.845 195 312 5	1.771 845 195 312 5	0.001 771 845 195 312 5	=1 avdp dram
5	0.010 416 67	0.008 571 429	3887.934 6	3.887 934 6	0.003 887 934 6	=1 apoth dram
1 458 3	0.075 954 86	0.062 5	28 349.523 125	28.349 523 125	0.028 349 523 125	=1 avdp ounce
1	0.083 333 333	0.068 571 43	31 103.476 8	31.103 476 8	0.031 103 476 8	=1 apoth or troy ounce
12	1	0.822 857 1	373 241.721 6	373.241 721 6	0.373 241 721 6	=1 apoth or troy pound
3 33	1.215 278	1	453 592.37	453.592 37	0.453 592 37	=1 avdp pound
0 032 150 75	0.000 002 679 229	0.000 002 204 623	1	0.001	0.000 001	=1 milligram
2 150 75	0.002 679 229	0.002 204 623	1000	1	0.001	=1 gram
0 75	2.679 229	2.204 623	1 000 000	1 000	1	=1 kilogram

AN AVOIRDUPOIS OUNCES

Long tons	Kilograms	Metric tons	Units
0.000 027 901 79	0.028 349 523 125	0.000 028 349 523 125	=1 avoirdupois ounce
0.000 446 428 6	0.453 592 37	0.000 453 592 37	=1 avoirdupois pound
0.044 642 86	45.359 237	0.045 359 237	=1 short hundredweight
0.892 857 1	907.184 74	0.907 184 74	=1 short ton
1	1016.046 908 8	1.016 046 908 8	=1 long ton
0.000 984 206 5	1	0.001	=1 kilogram
0.984 206 5	1 000	1	=1 metric ton

6.5. UNITS OF CAPACITY

Units	Dry pints	Dry quarts	Pecks	Bushels
1 dry pint =	1	0.5	0.062 5	0.015 625
1 dry quart =	2	1	0.125	0.031 25
1 peck =	16	8	1	0.25
1 bushel =	64	32	4	1
1 cubic inch =	0.029 761 6	0.014 880 8	0.001 860 10	0.000 465 025
1 cubic foot =	51.428 09	25.714 05	3.214 256	0.803 563 95
1 liter =	1.816 217	0.908 108 4	0.113 513 6	0.028 378 39
1 dekaliter =	18.162 17	9.081 084	1.135 136	0.283 783 9

6.6. UNITS OF MASS NOT GREATER THAN POUNDS AND KILOGRAMS

Units	Grains	Apothecaries scruples	Pennyweights	Avoirdupois drams	Apothecaries drams	Avoirdupois ounces
1 grain =	1	0.05	0.041 666 67	0.036 571 43	0.016 666 67	0 002 285 714
1 apoth scruple =	20	1	0.833 333 3	0.731 428 6	0.333 333 3	0.045 714 29
1 pennyweight =	24	1.2	1	0.877 714 3	0.4	0.054 857 14
1 avdp dram =	27.343 75	1.367 187 5	1.139 323	1	0.455 729 2	0.062 5
1 apoth dram =	60	3	2.5	2.194 286	1	0.137 142 9
1 avdp ounce =	437.5	21.875	18.229 17	16	7.291 667	1
1 apoth or troy ounce =	480	24	20	17.554 29	8	1.097 143
1 apoth or troy pound =	5.760	288	240	210.651 4	96	13.165 71
1 avdp pound =	7 000	350	291.666 7	256	116.666 7	16
1 milligram =	0.015 432 36	0.000 771 617 9	0.000 643 014 9	0.000 564 383 4	0.000 257 206 0	0.000 035 273 9
1 gram =	15.432 36	0.771 617 9	0.643 014 9	0.564 383 4	0.257 206 0	0 035 273 96
1 kilogram =	15 432 36	771.617 9	643.014 9	564.383 4	257.206 0	35.273 96

6.7. UNITS OF MASS NOT LESS THAN AVOIRDUPOIS OUNCES

Units	Avourdupois ounces	Avourdupois pounds	Short hundred weights	Short tons
1 avourdupois ounce =	1	0.0625	0.000 625	0.000 031 25
1 avoirdupois pound =	16	1	0.01	0.000 5
1 short hundredweight =	1 600	100	1	0.05
1 short ton =	32 000	2 000	20	1
1 long ton =	35 840	2 240	22.4	1.12
1 kilogram =	35.273 96	2.204 623	0.022 046 23	0.001 102 311
1 metric ton =	35 273.96	2204.623	22.046 23	1.102 311

DRY MEASURE

Cubic inches	Cubic feet	Liters	Dekaliters	Units
33.600 312 5	0.019 444 63	0.550 595 1	0.055 059 51	=1 dry pint
67.200 625	0.038 889 25	1.101 190	0.110 119 0	=1 dry quart
537.605	0.311 114	8.809 521	0.880 952 1	=1 peck
2150.42	1.244 456	35.238 08	3.523 808	=1 bushel
1	0.000 578 703 7	0.016 386 61	0.001 638 661	=1 cubic inch
1728	1	28.316 05	2.831 605	=1 cubic foot
61.025 45	0.035.315 66	1	0.1	=1 liter
610.254 5	0.353 156 6	10	1	=1 dekaliter

THAN POUNDS AND KILOGRAMS

Apothecaries or troy ounces	Apothecaries or troy pounds	Avourdupois pounds	Milligrams	Grams	Kilograms	Units
0.002 083 333	0.000 173 611 1	0.000 142 857 1	64.798 91	0.064 798 91	0.000 064 798 91	=1 grain
0.041 666 67	0.003 472 222	0.002 857 143	1295.978 2	1.295 978 2	0.001 295 978 2	=1 apoth scruple
0.05	0.004 166 667	0.003 428 571	1555.173 84	1.555 173 84	0.001 555 173 84	=1 pennyweight
0.056 966 15	0.004 747 179	0.003 906 25	1771.845 195 312 5	1.771 845 195 312 5	0.001 771 845 195 312 5	=1 avdp dram
0.125	0.010 416 67	0.008 571 429	3887.934 6	3.887 934 6	0.003 887 934 6	=1 apoth dram
0.911 458 3	0.075 954 86	0.062 5	28 349.523 125	28.349 523 125	0.028 349 523 125	=1 avdp ounce
1	0.083 333 333	0.068 571 43	31 103.476 8	31.103 476 8	0.031 103 476 8	=1 apoth or troy ounce
12	1	0.822 857 1	373 241.721 6	373.241 721 6	0.373 241 721 6	=1 apoth or troy pound
14 583 33	1.215 278	1	453 592.37	453.592 37	0.453 592 37	=1 avdp pound
0.000 032 150 75	0.000 002 679 229	0.000 002 204 623	1	0.001	0.000 001	=1 milligram
0 032 150 75	0.002 679 229	0.002 204 623	1000	1	0.001	=1 gram
32.150 75	2.679 229	2.204 623	1 000 000	1 000	1	=1 kilogram

THAN AVOIRDUPOIS OUNCES

Long tons	Kilograms	Metric tons	Units
0.000 027 901 79	0.028 349 523 125	0.000 028 349 523 125	=1 avoirdupois ounce
0.000 446 428 6	0.453 592 37	0.000 453 592 37	=1 avoirdupois pound
0.044 642 86	45.359 237	0.045 359 237	=1 short hundredweight
0.892 857 1	907.184 74	0.907 184 74	=1 short ton
1	1016.046 908 8	1.016 046 908 8	=1 long ton
0.000 984 206 5	1	0.001	=1 kilogram
0.984 206 5	1 000	1	=1 metric ton

7. COMPARISON OF METRIC AND CUSTOMARY UNITS FROM 1 TO 9

7.1 LENGTH

Inches (in.)	Millimeters (mm)	Feet (ft)	Meters (m)	Yards (yd)	Meters (m)	Rods (rd)	Meters (m)	Miles (mi)	Kilometers (km)
1	25.4	1	0.3048	1	0.9144	1	5.0292	1	1.609 344
2	50.8	2	0.6096	2	1.8288	2	10.0584	2	3.218 688
3	76.2	3	0.9144	3	2.7432	3	15.0876	3	4.828 032
4	101.6	4	1.2192	4	3.6576	4	20.1168	4	6.437 376
5	127.0	5	1.5240	5	4.5720	5	25.1460	5	8.046 720
6	152.4	6	1.8288	6	5.4864	6	30.1752	6	9.656 064
7	177.8	7	2.1336	7	6.4008	7	35.2044	7	11.265 408
8	203.2	8	2.4384	8	7.3152	8	40.2336	8	12.874 752
9	228.6	9	2.7432	9	8.2296	9	45.2628	9	14.484 096
0.039 3701	1	3.280 84	1	1.093 613	1	0.198 839	1	0.621 371	1
0.078 7402	2	6.561 68	2	2.187 227	2	0.397 678	2	1.242 742	2
0.118 1102	3	9.842 52	3	3.280 840	3	0.596 516	3	1.864 114	3
0.157 4803	4	13.123 36	4	4.374 453	4	0.795 355	4	2.485 485	4
0.196 8504	5	16.404 20	5	5.468 066	5	0.994 194	5	3.106 856	5
0.236 2205	6	19.685 04	6	6.561 680	6	1.193 033	6	3.728 227	6
0.275 5906	7	22.965 88	7	7.655 293	7	1.391 871	7	4.349 598	7
0.314 9606	8	26 246 72	8	8.748 906	8	1.590 710	8	4.970 970	8
0.354 3307	9	29.527 56	9	9.842 520	9	1.789 549	9	5.592 341	9

7.2. AREA

Square inches (in.²)	Square centimeters (cm²)	Square feet (ft²)	Square meters (m²)	Square yards (yd²)	Square meters (m²)	Acres (acre)	Hectares (ha)	Square miles (mi²)	Square kilometers (km²)
1	6.4516	1	0.092 903	1	0.836 13	1	0.404 69	1	2.5900
2	12.9032	2	0.185 806	2	1.672 25	2	0.809 37	2	5.1800
3	19.3548	3	0.278 709	3	2.508 38	3	1.214 06	3	7.7700
4	25.8064	4	0.371 612	4	3.344 51	4	1.618 74	4	10.3600
5	32.2580	5	0.464 515	5	4.180 64	5	2.023 43	5	12.9499
6	38.7096	6	0.557 418	6	5.016 76	6	2.428 11	6	15.5399
7	45.1612	7	0.650 321	7	5.852 89	7	2.832 80	7	18.1299
8	51.6128	8	0.743 224	8	6.689 02	8	3.237 49	8	20.7199
9	58.0644	9	0.836 127	9	7.525 15	9	3.642 17	9	23.3099
0.155 00	1	10.7639	1	1.1960	1	2.4711	1	0.386 10	1
0.310 00	2	21.5278	2	2.3920	2	4.9421	2	0.772 20	2
0.465 00	3	32.2917	3	3.5880	3	7.4132	3	1.158 31	3
0.620 00	4	43.0556	4	4.7840	4	9.8842	4	1.544 41	4
0.775 00	5	53.8196	5	5.9800	5	12.3553	5	1.930 51	5
0.930 00	6	64.5835	6	7.1759	6	14.8263	6	2.316 61	6
1.085 00	7	75.3474	7	8.3719	7	17.2974	7	2.702 72	7
1.240 00	8	86.1113	8	9.5679	8	19.7684	8	3.088 82	8
1.395 00	9	96.8752	9	10.7639	9	22.2395	9	3.474 92	9

7.3. VOLUME

Cubic yards (yd³)	Cubic meters (m³)	Cubic inches (in.³)	Liters (liter)	Cubic inches (in.³)	Cubic centimeters (cm³)	Cubic feet (ft³)	Cubic meters (m³)	Cubic feet (ft³)	Liters (liter)
1	0.764 55	1	0.016 387	1	16.387	1	0.028 317	1	28.316
2	1.529 11	2	0.032 773	2	32.774	2	0.056 634	2	56.632
3	2.293 66	3	0.049 160	3	49.161	3	0.084 951	3	84.948
4	3.058 22	4	0.065 546	4	65.548	4	0.113 267	4	113.264
5	3.822 77	5	0.081 933	5	81.935	5	0.141 584	5	141.580
6	4.587 33	6	0.098 320	6	98.322	6	0.169 901	6	169.896
7	5.351 88	7	0.114 706	7	114.709	7	0.198 218	7	198.212
8	6.116 44	8	0.131 093	8	131.097	8	0.226 535	8	226.528
9	6.880 99	9	0.147 479	9	147.484	9	0.254 852	9	254.844
1.3080	1	61.025	1	0.061 024	1	35.315	1	0.035 316	1
2.6159	2	122.051	2	0.122 047	2	70.629	2	0.070 631	2
3.9239	3	183.076	3	0.183 071	3	105.944	3	0.105 947	3
5.2318	4	244.102	4	0.244 095	4	141.259	4	0.141 263	4
6.5398	5	305.127	5	0.305 119	5	176.573	5	0.176 578	5
7.8477	6	366.153	6	0.366 142	6	211.888	6	0.211 894	6
9.1557	7	427.178	7	0.427 166	7	247.203	7	0.247 210	7
10.4636	8	488.204	8	0.488 190	8	282.517	8	0.282 525	8
11.7716	9	549.229	9	0.549 214	9	317.832	9	0.317 841	9

7.4. CAPACITY—LIQUID MEASURE

U.S. fluid drams (fl dr)	Milliliters (ml)	U.S. fluid ounces (fl oz)	Milliliters (ml)	U.S. liquid pints (pt)	Liters (liter)	U.S. liquid quarts (qt)	Liters (liter)	U.S. gallons (gal)	Liters (liter)
1 =	3.697	1 =	29.57	1 =	0.4732	1 =	0.9463	1 =	3.785
2 =	7.393	2 =	59.15	2 =	0.9463	2 =	1.8927	2 =	7.571
3 =	11.090	3 =	88.72	3 =	1.4195	3 =	2.8390	3 =	11.356
4 =	14.786	4 =	118.29	4 =	1.8927	4 =	3.7853	4 =	15.141
5 =	18.483	5 =	147.86	5 =	2.3658	5 =	4.7316	5 =	18.927
6 =	22.180	6 =	177.44	6 =	2.8390	6 =	5.6780	6 =	22.712
7 =	25.876	7 =	207.01	7 =	3.3121	7 =	6.6243	7 =	26.497
8 =	29.573	8 =	236.58	8 =	3.7853	8 =	7.5706	8 =	30.282
9 =	33.269	9 =	266.15	9 =	4.2585	9 =	8.5169	9 =	34.068
0.2705 =	1	0.033 81 =	1	2.113 =	1	1.0567 =	1	0.2642 =	1
0.5410 =	2	0.067 63 =	2	4.227 =	2	2.1134 =	2	0.5284 =	2
0.8116 =	3	0.101 44 =	3	6.340 =	3	3.1702 =	3	0.7925 =	3
1.0821 =	4	0.135 26 =	4	8.454 =	4	4.2269 =	4	1.0567 =	4
1.3526 =	5	0.169 07 =	5	10.567 =	5	5.2836 =	5	1.3209 =	5
1.6231 =	6	0.202 89 =	6	12.681 =	6	6.3403 =	6	1.5851 =	6
1.8936 =	7	0.236 70 =	7	14.794 =	7	7.3970 =	7	1.8493 =	7
2.1642 =	8	0.270 52 =	8	16.907 =	8	8.4537 =	8	2.1134 =	8
2.4347 =	9	0.304 33 =	9	19.021 =	9	9.5105 =	9	2.3776 =	9

7.5. CAPACITY—DRY MEASURE

U.S. dry quarts (qt)	Liters (liter)	U.S. pecks (pk)	Liters (liter)	U.S. pecks (pk)	Dekaliters (dkl)	U.S. bushels (bu)	Hecto-liters (hl)	U.S. bushels per acre	Hecto-liters per hectare
1 =	1.1012	1 =	8.810	1 =	0.8810	1 =	0.3524	1 =	0.8708
2 =	2.2024	2 =	17.619	2 =	1.7619	2 =	0.7048	2 =	1.7415
3 =	3.3036	3 =	26.429	3 =	2.6429	3 =	1.0571	3 =	2.6123
4 =	4.4048	4 =	35.238	4 =	3.5238	4 =	1.4095	4 =	3.4830
5 =	5.5060	5 =	44.048	5 =	4.4048	5 =	1.7619	5 =	4.3538
6 =	6.6071	6 =	52.857	6 =	5.2857	6 =	2.1143	6 =	5.2245
7 =	7.7083	7 =	61.667	7 =	6.1667	7 =	2.4667	7 =	6.0953
8 =	8.8095	8 =	70.476	8 =	7.0476	8 =	2.8190	8 =	6.9660
9 =	9.9107	9 =	79.286	9 =	7.9286	9 =	3.1714	9 =	7.8368
0.9081 =	1	0.113 51 =	1	1.1351 =	1	2.838 =	1	1.1484 =	1
1.8162 =	2	0.227 03 =	2	2.2703 =	2	5.676 =	2	2.2969 =	2
2.7243 =	3	0.340 54 =	3	3.4054 =	3	8.514 =	3	3.4453 =	3
3.6324 =	4	0.454 05 =	4	4.5405 =	4	11.351 =	4	4.5937 =	4
4.5405 =	5	0.567 57 =	5	5.6757 =	5	14.189 =	5	5.7422 =	5
5.4487 =	6	0.681 08 =	6	6.8108 =	6	17.027 =	6	6.8906 =	6
6.3568 =	7	0.794 59 =	7	7.9460 =	7	19.865 =	7	8.0390 =	7
7.2649 =	8	0.908 11 =	8	9.0811 =	8	22.703 =	8	9.1875 =	8
8.1730 =	9	1.021 62 =	9	10.2162 =	9	25.541 =	9	10.3359 =	9

7.6. MASS

Grains (grain)	Grams (g)	Apothecaries drams (dr ap or ℥)	Grams (g)	Troy ounces (oz t)	Grams (g)	Avoirdupois ounces (oz avdp)	Grams (g)	Avoirdupois pounds (lb avdp)	Kilograms (kg)
1 =	0.064 7989	1 =	3.887 93	1 =	31.1035	1 =	28.3495	1 =	0.453 592
2 =	0.129 5978	2 =	7.775 87	2 =	62.2070	2 =	56.6990	2 =	0.907 185
3 =	0.194 3967	3 =	11.663 80	3 =	93.3104	3 =	85.0486	3 =	1.360 777
4 =	0.259 1956	4 =	15.551 74	4 =	124.4139	4 =	113.3981	4 =	1.814 369
5 =	0.323 9946	5 =	19.439 67	5 =	155.5174	5 =	141.7476	5 =	2.267 962
6 =	0.388 7935	6 =	23.327 61	6 =	186.6209	6 =	170.0971	6 =	2.721 554
7 =	0.453 5924	7 =	27.215 54	7 =	217.7243	7 =	198.4467	7 =	3.175 147
8 =	0.518 3913	8 =	31.103 48	8 =	248.8278	8 =	226.7962	8 =	3.628 739
9 =	0.583 1902	9 =	34.991 41	9 =	279.9313	9 =	255.1457	9 =	4.082 331
15.4324 =	1	0.257 206 =	1	0.032 1507 =	1	0.035 2740 =	1	2.204 62 =	1
30.8647 =	2	0.514 412 =	2	0.064 3015 =	2	0.070 5479 =	2	4.409 25 =	2
46.2971 =	3	0.771 618 =	3	0.096 4522 =	3	0.105 8219 =	3	6.613 87 =	3
61.7294 =	4	1.028 824 =	4	0.128 6030 =	4	0.141 0958 =	4	8.818 49 =	4
77.1618 =	5	1.286 030 =	5	0.160 7537 =	5	0.176 3698 =	5	11.023 11 =	5
92.5941 =	6	1.543 236 =	6	0.192 9045 =	6	0.211 6438 =	6	13.227 74 =	6
108 0265 =	7	1.800 442 =	7	0.225 0552 =	7	0.246 9177 =	7	15.432 36 =	7
123.4589 =	8	2.057 648 =	8	0.257 2060 =	8	0.282 1917 =	8	17.636 98 =	8
138.8912 =	9	2.314 854 =	9	0.289 3567 =	9	0.317 4657 =	9	19.841 60 =	9

7.7. COMPARISON OF THE VARIOUS TONS AND POUNDS IN USE IN THE UNITED STATES (FROM 1 TO 9 UNITS)

Troy pounds	Avoirdupois pounds	Kilograms	Short tons	Long tons	Metric tons
1	0.822 86	0.373 24	0.000 411 43	0.000 367 35	0.000 373 24
2	1.645 71	0.746 48	0.000 822 86	0.000 734 69	0.000 746 48
3	2.468 57	1.119 73	0.001 234 29	0.001 102 04	0.001 119 73
4	3.291 43	1.492 97	0.001 645 71	0.001 469 39	0.001 492 97
5	4.114 29	1.866 21	0.002 057 14	0.001 836 73	0.001 866 21
6	4.937 14	2.239 45	0.002 468 57	0.002 204 08	0.002 239 45
7	5.760 00	2.612 69	0.002 880 00	0.002 571 43	0.002 612 69
8	6.582 86	2.985 93	0.003 291 43	0.002 938 78	0.002 985 93
9	7.405 71	3.359 18	0.003 702 86	0.003 306 12	0.003 359 18
1.215 28	1	0.453 59	0.0005	0.000 446 43	0.000 453 59
2.430 56	2	0.907 18	0.0010	0.000 892 86	0.000 907 18
3.645 83	3	1.360 78	0.0015	0.001 339 29	0.001 360 78
4.861 11	4	1.814 37	0.0020	0.001 785 71	0.001 814 37
6.076 39	5	2.267 96	0.0025	0.002 232 14	0.002 267 96
7.291 67	6	2.721 55	0.0030	0.002 678 57	0.002 721 55
8.506 94	7	3.175 15	0.0035	0.003 125 00	0.003 175 15
9.722 22	8	3.628 74	0.0040	0.003 571 43	0.003 628 74
10.937 50	9	4.082 33	0.0045	0.004 017 86	0.004 082 33
2.679 23	2.204 62	1	0.001 102 31	0.000 984 21	0.001
5.358 46	4.409 25	2	0.002 204 62	0.001 968 41	0.002
8.037 69	6.613 87	3	0.003 306 93	0.002 952 62	0.003
10.716 92	8.818 49	4	0.004 409 25	0.003 936 83	0.004
13.396 14	11.023 11	5	0.005 511 56	0.004 921 03	0.005
16.075 37	13.227 74	6	0.006 613 87	0.005 905 24	0.006
18.754 60	15.432 36	7	0.007 716 18	0.006 889 45	0.007
21.433 83	17.636 98	8	0.008 818 49	0.007 873 65	0.008
24.113 06	19.841 60	9	0.009 920 80	0.008 857 86	0.009
2 430.56	2 000	907.18	1	0.892 86	0.907 18
4 861.11	4 000	1 814.37	2	1.785 71	1.814 37
7 291.67	6 000	2 721.55	3	2.678 57	2.721 55
9 722.22	8 000	3 628.74	4	3.571 43	3.628 74
12 152.78	10 000	4 535.92	5	4.464 29	4.535 92
14 583.33	12 000	5 443.11	6	5.357 14	5.443 11
17 013.89	14 000	6 350.29	7	6.250 00	6 350.29
19 444.44	16 000	7 257.48	8	7.142 86	7.257 48
21 875.00	18 000	8 164.66	9	8.035 71	8.164 66
2 722.22	2 240	1 016.05	1.12	1	1.016 05
5 444.44	4 480	2 032.09	2.24	2	2.032 09
8 166.67	6 720	3 048.14	3.36	3	3.048 14
10 888.89	8 960	4 064.19	4.48	4	4.064 19
13 611.11	11 200	5 080.23	5.60	5	5.080 23
16 333.33	13 440	6 096.28	6.72	6	6 096.28
19 055.56	15 680	7 112.33	7.84	7	7.112 33
21 777.78	17 920	8 128.38	8.96	8	8.128 38
24 500.00	20 160	9 144.42	10.08	9	9.144 42
2 679.23	2 204.62	1 000	1.102 31	0.984 21	1
5 358.46	4 409.25	2 000	2.204 62	1.968 41	2
8 037.69	6 613.87	3 000	3 306.93	2.952 62	3
10 716.92	8 818.49	4 000	4.409 25	3.936 83	4
13 396.14	11 023.11	5 000	5.511 56	4.921 03	5
16 075.37	13 227.74	6 000	6.613 87	5 905.24	6
18 754.60	15 432.36	7 000	7.716 18	6.889 45	7
21 433.83	17 636.98	8 000	8 818.49	7 873.65	8
24 113.06	19 841.60	9 000	9.920 80	8.857 86	9

8. SPECIAL TABLES

8.1. LENGTH—INCHES AND MILLIMETERS—EQUIVALENTS OF DECIMAL AND BINARY FRACTIONS OF AN INCH IN MILLIMETERS

From 1/64 to 1 Inch

½'s	¼'s	8ths	16ths	32ds	64ths	Millimeters	Decimals of an inch	Inch	½'s	¼'s	8ths	16ths	32ds	64ths	Millimeters	Decimals of an inch
					1	= 0.397	0.015625							33	=13.097	0.515625
				1	2	= .794	.03125						17	34	=13.494	.53125
					3	= 1.191	.046875							35	=13.891	.546875
			1	2	4	= 1.588	.0625					9	18	36	=14.288	.5625
					5	= 1.984	.078125							37	=14.684	.578125
				3	6	= 2.381	.09375						19	38	=15.081	.59375
					7	= 2.778	.109375							39	=15.478	.609375
		1	2	4	8	= 3.175	.1250				5	10	20	40	=15.875	.625
					9	= 3.572	.140625							41	=16.272	.640625
				5	10	= 3.969	.15625						21	42	=16.669	.65625
					11	= 4.366	.171875							43	=17.066	.671875
			3	6	12	= 4.762	.1875					11	22	44	=17.462	.6875
					13	= 5.159	.203125							45	=17.859	.703125
				7	14	= 5.556	.21875						23	46	=18.256	.71875
					15	= 5.953	.234375							47	=18.653	.734375
	1	2	4	8	16	= 6.350	.2500			3	6	12	24	48	=19.050	.75
					17	= 6.747	.265625							49	=19.447	.765625
				9	18	= 7.144	.28125						25	50	=19.844	.78125
					19	= 7.541	.296875							51	=20.241	.796875
			5	10	20	= 7.938	.3125					13	26	52	=20.638	.8125
					21	= 8.334	.328125							53	=21.034	.828125
				11	22	= 8.731	.34375						27	54	=21.431	.84375
					23	= 9.128	.359375							55	=21.828	.859375
		3	6	12	24	= 9.525	.3750				7	14	28	56	=22.225	.875
					25	= 9.922	.390625							57	=22.622	.890625
				13	26	=10.319	.40625						29	58	=23.019	.90625
					27	=10.716	.421875							59	=23.416	.921875
			7	14	28	=11.112	.4375					15	30	60	=23.812	.9375
					29	=11.509	.453125							61	=24.209	.953125
				15	30	=11.906	.46875						31	62	=24.606	.96875
					31	=12.303	.484375							63	=25.003	.984375
1	2	4	8	16	32	=12.700	.5	1	2	4	8	16	32	64	=25.400	1.000

8.2. LENGTH—HUNDREDTHS OF AN INCH TO MILLIMETERS

From 1 to 99 Hundredths

Hundredths of an inch	0	1	2	3	4	5	6	7	8	9
	0	0.254	0.508	0.762	1.016	1.270	1.524	1.778	2.032	2.286
10	2.540	2.794	3.048	3.302	3.556	3.810	4.064	4.318	4.572	4.826
20	5.080	5.334	5.588	5.842	6.096	6.350	6.604	6.858	7.112	7.366
30	7.620	7.874	8.128	8.382	8.636	8.890	9.144	9.398	9.652	9.906
40	10.160	10.414	10.668	10.922	11.176	11.430	11.684	11.938	12.192	12.446
50	12.700	12.954	13.208	13.462	13.716	13.970	14.224	14.478	14.732	14.986
60	15.240	15.494	15.748	16.002	16.256	16.510	16.764	17.018	17.272	17.526
70	17.780	18.034	18.288	18.542	18.796	19.050	19.304	19.558	19.812	20.066
80	20.320	20.574	20.828	21.082	21.336	21.590	21.844	22.098	22.352	22.606
90	22.860	23.114	23.368	23.622	23.876	24.130	24.384	24.638	24.892	25.146

8.3. LENGTH—MILLIMETERS TO DECIMALS OF AN INCH

From 1 to 99 Units

Millimeters	0	1	2	3	4	5	6	7	8	9
	0	0.03937	0.07874	0.11811	0.15748	0.19685	0.23622	0.27559	0.31496	0.35433
10	0.39370	0.43307	0.47244	0.51181	0.55118	0.59055	0.62992	0.66929	0.70866	0.74803
20	0.78740	0.82677	0.86614	0.90551	0.94488	0.98425	1.02362	1.06299	1.10236	1.14173
30	1.18110	1.22047	1.25984	1.29921	1.33858	1.37795	1.41732	1.45669	1.49606	1.53543
40	1.57480	1.61417	1.65354	1.69291	1.73228	1.77165	1.81102	1.85039	1.88976	1.92913
50	1.96850	2.00787	2.04724	2.08661	2.12598	2.16535	2.20472	2.24409	2.28346	2.32283
60	2.36220	2.40157	2.44094	2.48031	2.51968	2.55905	2.59842	2.63779	2.67716	2.71653
70	2.75590	2.79527	2.83464	2.87401	2.91338	2.95275	2.99212	3.03149	3.07086	3.11023
80	3.14960	3.18897	3.22834	3.26771	3.30708	3.34645	3.38582	3.42519	3.46456	3.50393
90	3.54330	3.58267	3.62204	3.66141	3.70078	3.74015	3.77952	3.81889	3.85826	3.89763

8.4. LENGTH—INTERNATIONAL NAUTICAL MILES AND KILOMETERS

Basic relation: International nautical mile = 1.852 kilometers.

Int. nautical miles	Kilometers	Int. nautical miles	Kilometers	Kilometers	Int. nautical miles	Kilometers	Int. nautical miles
0		50	92.600	0		50	26.9978
1	1.852	1	94.452	1	0.5400	1	27.5378
2	3.704	2	96.304	2	1.0799	2	28.0778
3	5.556	3	98.156	3	1.6199	3	28.6177
4	7.408	4	100.008	4	2.1598	4	29.1577
5	9.260	5	101.860	5	2.6998	5	29.6976
6	11.112	6	103.712	6	3.2397	6	30.2376
7	12.964	7	105.564	7	3.7797	7	30.7775
8	14.816	8	107.416	8	4.3197	8	31.3175
9	16.668	9	109.268	9	4.8596	9	31.8575
10	18.520	60	111.120	10	5.3996	60	32.3974
1	20.372	1	112.972	1	5.9395	1	32.9374
2	22.224	2	114.824	2	6.4795	2	33.4773
3	24.076	3	116.676	3	7.0194	3	34.0173
4	25.928	4	118.528	4	7.5594	4	34.5572
5	27.780	5	120.380	5	8.0994	5	35.0972
6	29.632	6	122.232	6	8.6393	6	35.6371
7	31.484	7	124.084	7	9.1793	7	36.1771
8	33.336	8	125.936	8	9.7192	8	36.7171
9	35.188	9	127.788	9	10.2592	9	37.2570
20	37.040	70	129.640	20	10.7991	70	37.7970
1	38.892	1	131.492	1	11.3391	1	38.3369
2	40.744	2	133.344	2	11.8790	2	38.8769
3	42.596	3	135.196	3	12.4190	3	39.4168
4	44.448	4	137.048	4	12.9590	4	39.9568
5	46.300	5	138.900	5	13.4989	5	40.4968
6	48.152	6	140.752	6	14.0389	6	41.0367
7	50.004	7	142.604	7	14.5788	7	41.5767
8	51.856	8	144.456	8	15.1188	8	42.1166
9	53.708	9	146.308	9	15.6587	9	42.6566
30	55.560	80	148.160	30	16.1987	80	43.1965
1	57.412	1	150.012	1	16.7387	1	43.7365
2	59.264	2	151.864	2	17.2786	2	44.2765
3	61.116	3	153.716	3	17.8186	3	44.8164
4	62.968	4	155.568	4	18.3585	4	45.3564
5	64.820	5	157.420	5	18.8985	5	45.8963
6	66.672	6	159.272	6	19.4384	6	46.4363
7	68.524	7	161.124	7	19.9784	7	46.9762
8	70.376	8	162.976	8	20.5184	8	47.5162
9	72.228	9	164.828	9	21.0583	9	48.0562
40	74.080	90	166.680	40	21.5983	90	48.5961
1	75.932	1	168.532	1	22.1382	1	49.1361
2	77.784	2	170.384	2	22.6782	2	49.6760
3	79.636	3	172.236	3	23.2181	3	50.2160
4	81.488	4	174.088	4	23.7581	4	50.7559
5	83.340	5	175.940	5	24.2981	5	51.2959
6	85.192	6	177.792	6	24.8380	6	51.8359
7	87.044	7	179.644	7	25.3780	7	52.3758
8	88.896	8	181.496	8	25.9179	8	52.9158
9	90.748	9	183.348	9	26.4579	9	53.4557
		100	185.200			100	53.9957

8.5. COMPOUND UNITS

Equivalents for compound units such as velocity, density, and pressure may be found from the tables of the basic units. In some cases the equivalents will be found directly in the tables of this publication, but in most cases a calculation will be necessary using two or more tables sometimes with other physical data such as 60 seconds = 1 minute. A few typical examples are shown below:

Velocity

1 foot per second = 0.3048 meter per second

$$1 \text{ foot per second} = \frac{0.3048}{60} \text{ meter per minute}$$

1 foot per minute = 0.3048 × 60 meters per second
(see appropriate length conversion tables)

Acceleration

1 foot per second per second = 0.3048 meter per second per second

$$1 \text{ foot per second per second} = \frac{0.3048}{60 \times 60} \text{ meter per minute per minute}$$

1 foot per minute per minute = 0.3048 × 60 × 60 meters per second per second
(see appropriate length conversion tables)

Density

$$1 \text{ pound per cubic foot} = \frac{453.592\,37}{28\,316.846\,592} \text{ grams per cubic centimeter}$$

(see appropriate mass and volume conversion tables)

Mass (or Weight) per Unit Length

$$1 \text{ pound per yard} = \frac{0.453\,592\,37}{0.9144} \text{ kilogram per meter}$$

(see appropriate mass and length conversion tables)

Pressure

$$1 \text{ pound per square inch} = \frac{0.453\,592\,37}{6.4516} \text{ kilograms per square centimeter}$$

(see appropriate mass and area conversion tables)

8.6. LENGTH—INCHES TO MILLIMETERS

[Reduction Factor: 1 inch = 25.4 millimeters]

Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters
0.00		1.00	25.400	2.00	50.800	3.00	76.200	4.00	101.600	5.00	127.000	6.00	152.400	7.00	177.800	8.00	203.200	9.00	228.600
.01	0.254	1.01	25.654	2.01	51.054	3.01	76.454	4.01	101.854	5.01	127.254	6.01	152.654	7.01	178.054	8.01	203.454	9.01	228.854
.02	.508	1.02	25.908	2.02	51.308	3.02	76.708	4.02	102.108	5.02	127.508	6.02	152.908	7.02	178.308	8.02	203.708	9.02	229.108
.03	.762	1.03	26.162	2.03	51.562	3.03	76.962	4.03	102.362	5.03	127.762	6.03	153.162	7.03	178.562	8.03	203.962	9.03	229.362
.04	1.016	1.04	26.416	2.04	51.816	3.04	77.216	4.04	102.616	5.04	128.016	6.04	153.416	7.04	178.816	8.04	204.216	9.04	229.616
.05	1.270	1.05	26.670	2.05	52.070	3.05	77.470	4.05	102.870	5.05	128.270	6.05	153.670	7.05	179.070	8.05	204.470	9.05	229.870
.06	1.524	1.06	26.924	2.06	52.324	3.06	77.724	4.06	103.124	5.06	128.524	6.06	153.924	7.06	179.324	8.06	204.724	9.06	230.124
.07	1.778	1.07	27.178	2.07	52.578	3.07	77.978	4.07	103.378	5.07	128.778	6.07	154.178	7.07	179.578	8.07	204.978	9.07	230.378
.08	2.032	1.08	27.432	2.08	52.832	3.08	78.232	4.08	103.632	5.08	129.032	6.08	154.432	7.08	179.832	8.08	205.232	9.08	230.632
.09	2.286	1.09	27.686	2.09	53.086	3.09	78.486	4.09	103.886	5.09	129.286	6.09	154.686	7.09	180.086	8.09	205.486	9.09	230.886
0.10	2.540	1.10	27.940	2.10	53.340	3.10	78.740	4.10	104.140	5.10	129.540	6.10	154.940	7.10	180.340	8.10	205.740	9.10	231.140
.11	2.794	1.11	28.194	2.11	53.594	3.11	78.994	4.11	104.394	5.11	129.794	6.11	155.194	7.11	180.594	8.11	205.994	9.11	231.394
.12	3.048	1.12	28.448	2.12	53.848	3.12	79.248	4.12	104.648	5.12	130.048	6.12	155.448	7.12	180.848	8.12	206.248	9.12	231.648
.13	3.302	1.13	28.702	2.13	54.102	3.13	79.502	4.13	104.902	5.13	130.302	6.13	155.702	7.13	181.102	8.13	206.502	9.13	231.902
.14	3.556	1.14	28.956	2.14	54.356	3.14	79.756	4.14	105.156	5.14	130.556	6.14	155.956	7.14	181.356	8.14	206.756	9.14	232.156
.15	3.810	1.15	29.210	2.15	54.610	3.15	80.010	4.15	105.410	5.15	130.810	6.15	156.210	7.15	181.610	8.15	207.010	9.15	232.410
.16	4.064	1.16	29.464	2.16	54.864	3.16	80.264	4.16	105.664	5.16	131.064	6.16	156.464	7.16	181.864	8.16	207.264	9.16	232.664
.17	4.318	1.17	29.718	2.17	55.118	3.17	80.518	4.17	105.918	5.17	131.318	6.17	156.718	7.17	182.118	8.17	207.518	9.17	232.918
.18	4.572	1.18	29.972	2.18	55.372	3.18	80.772	4.18	106.172	5.18	131.572	6.18	156.972	7.18	182.372	8.18	207.772	9.18	233.172
.19	4.826	1.19	30.226	2.19	55.626	3.19	81.026	4.19	106.426	5.19	131.826	6.19	157.226	7.19	182.626	8.19	208.026	9.19	233.426
0.20	5.080	1.20	30.480	2.20	55.880	3.20	81.280	4.20	106.680	5.20	132.080	6.20	157.480	7.20	182.880	8.20	208.280	9.20	233.680
.21	5.334	1.21	30.734	2.21	56.134	3.21	81.534	4.21	106.934	5.21	132.334	6.21	157.734	7.21	183.134	8.21	208.534	9.21	233.934
.22	5.588	1.22	30.988	2.22	56.388	3.22	81.788	4.22	107.188	5.22	132.588	6.22	157.988	7.22	183.388	8.22	208.788	9.22	234.188
.23	5.842	1.23	31.242	2.23	56.642	3.23	82.042	4.23	107.442	5.23	132.842	6.23	158.242	7.23	183.642	8.23	209.042	9.23	234.442
.24	6.096	1.24	31.496	2.24	56.896	3.24	82.296	4.24	107.696	5.24	133.096	6.24	158.496	7.24	183.896	8.24	209.296	9.24	234.696
.25	6.350	1.25	31.750	2.25	57.150	3.25	82.550	4.25	107.950	5.25	133.350	6.25	158.750	7.25	184.150	8.25	209.550	9.25	234.950
.26	6.604	1.26	32.004	2.26	57.404	3.26	82.804	4.26	108.204	5.26	133.604	6.26	159.004	7.26	184.404	8.26	209.804	9.26	235.204
.27	6.858	1.27	32.258	2.27	57.658	3.27	83.058	4.27	108.458	5.27	133.858	6.27	159.258	7.27	184.658	8.27	210.058	9.27	235.458
.28	7.112	1.28	32.512	2.28	57.912	3.28	83.312	4.28	108.712	5.28	134.112	6.28	159.512	7.28	184.912	8.28	210.312	9.28	235.712
.29	7.366	1.29	32.766	2.29	58.166	3.29	83.566	4.29	108.966	5.29	134.366	6.29	159.766	7.29	185.166	8.29	210.566	9.29	235.966
0.30	7.620	1.30	33.020	2.30	58.420	3.30	83.820	4.30	109.220	5.30	134.620	6.30	160.020	7.30	185.420	8.30	210.820	9.30	236.220
.31	7.874	1.31	33.274	2.31	58.674	3.31	84.074	4.31	109.474	5.31	134.874	6.31	160.274	7.31	185.674	8.31	211.074	9.31	236.474
.32	8.128	1.32	33.528	2.32	58.928	3.32	84.328	4.32	109.728	5.32	135.128	6.32	160.528	7.32	185.928	8.32	211.328	9.32	236.728
.33	8.382	1.33	33.782	2.33	59.182	3.33	84.582	4.33	109.982	5.33	135.382	6.33	160.782	7.33	186.182	8.33	211.582	9.33	236.982
.34	8.636	1.34	34.036	2.34	59.436	3.34	84.836	4.34	110.236	5.34	135.636	6.34	161.036	7.34	186.436	8.34	211.836	9.34	237.236
.35	8.890	1.35	34.290	2.35	59.690	3.35	85.090	4.35	110.490	5.35	135.890	6.35	161.290	7.35	186.690	8.35	212.090	9.35	237.490
.36	9.144	1.36	34.544	2.36	59.944	3.36	85.344	4.36	110.744	5.36	136.144	6.36	161.544	7.36	186.944	8.36	212.344	9.36	237.744
.37	9.398	1.37	34.798	2.37	60.198	3.37	85.598	4.37	110.998	5.37	136.398	6.37	161.798	7.37	187.198	8.37	212.598	9.37	237.998
.38	9.652	1.38	35.052	2.38	60.452	3.38	85.852	4.38	111.252	5.38	136.652	6.38	162.052	7.38	187.452	8.38	212.852	9.38	238.252
.39	9.906	1.39	35.306	2.39	60.706	3.39	86.106	4.39	111.506	5.39	136.906	6.39	162.306	7.39	187.706	8.39	213.106	9.39	238.506
0.40	10.160	1.40	35.560	2.40	60.960	3.40	86.360	4.40	111.760	5.40	137.160	6.40	162.560	7.40	187.960	8.40	213.360	9.40	238.760
.41	10.414	1.41	35.814	2.41	61.214	3.41	86.614	4.41	112.014	5.41	137.414	6.41	162.814	7.41	188.214	8.41	213.614	9.41	239.014
.42	10.668	1.42	36.068	2.42	61.468	3.42	86.868	4.42	112.268	5.42	137.668	6.42	163.068	7.42	188.468	8.42	213.868	9.42	239.268
.43	10.922	1.43	36.322	2.43	61.722	3.43	87.122	4.43	112.522	5.43	137.922	6.43	163.322	7.43	188.722	8.43	214.122	9.43	239.522
.44	11.176	1.44	36.576	2.44	61.976	3.44	87.376	4.44	112.776	5.44	138.176	6.44	163.576	7.44	188.976	8.44	214.376	9.44	239.776
.45	11.430	1.45	36.830	2.45	62.230	3.45	87.630	4.45	113.030	5.45	138.430	6.45	163.830	7.45	189.230	8.45	214.630	9.45	240.030
.46	11.684	1.46	37.084	2.46	62.484	3.46	87.884	4.46	113.284	5.46	138.684	6.46	164.084	7.46	189.484	8.46	214.884	9.46	240.284
.47	11.938	1.47	37.338	2.47	62.738	3.47	88.138	4.47	113.538	5.47	138.938	6.47	164.338	7.47	189.738	8.47	215.138	9.47	240.538
.48	12.192	1.48	37.592	2.48	62.992	3.48	88.392	4.48	113.792	5.48	139.192	6.48	164.592	7.48	189.992	8.48	215.392	9.48	240.792
.49	12.446	1.49	37.846	2.49	63.246	3.49	88.646	4.49	114.046	5.49	139.446	6.49	164.846	7.49	190.246	8.49	215.646	9.49	241.046

0.50	12.700	1.50	38.100	2.50	63.500	3.50	88.900	4.50	114.300	5.50	139.700	6.50	165.100	7.50	190.500	8.50	215.900	9.50	241.300
.51	12.954	1.51	38.354	2.51	63.754	3.51	89.154	4.51	114.554	5.51	139.954	6.51	165.354	7.51	190.754	8.51	216.154	9.51	241.554
.52	13.208	1.52	38.608	2.52	64.008	3.52	89.408	4.52	114.808	5.52	140.208	6.52	165.608	7.52	191.008	8.52	216.408	9.52	241.808
.53	13.462	1.53	38.862	2.53	64.262	3.53	89.662	4.53	115.062	5.53	140.462	6.53	165.862	7.53	191.262	8.53	216.662	9.53	242.062
.54	13.716	1.54	39.116	2.54	64.516	3.54	89.916	4.54	115.316	5.54	140.716	6.54	166.116	7.54	191.516	8.54	216.916	9.54	242.316
.55	13.970	1.55	39.370	2.55	64.770	3.55	90.170	4.55	115.570	5.55	140.970	6.55	166.370	7.55	191.770	8.55	217.170	9.55	242.570
.56	14.224	1.56	39.624	2.56	65.024	3.56	90.424	4.56	115.824	5.56	141.224	6.56	166.624	7.56	192.024	8.56	217.424	9.56	242.824
.57	14.478	1.57	39.878	2.57	65.278	3.57	90.678	4.57	116.078	5.57	141.478	6.57	166.878	7.57	192.278	8.57	217.678	9.57	243.078
.58	14.732	1.58	40.132	2.58	65.532	3.58	90.932	4.58	116.332	5.58	141.732	6.58	167.132	7.58	192.532	8.58	217.932	9.58	243.332
.59	14.986	1.59	40.386	2.59	65.786	3.59	91.186	4.59	116.586	5.59	141.986	6.59	167.386	7.59	192.786	8.59	218.186	9.59	243.586
0.60	15.240	1.60	40.640	2.60	66.040	3.60	91.440	4.60	116.840	5.60	142.240	6.60	167.640	7.60	193.040	8.60	218.440	9.60	243.840
.61	15.494	1.61	40.894	2.61	66.294	3.61	91.694	4.61	117.094	5.61	142.494	6.61	167.894	7.61	193.294	8.61	218.694	9.61	244.094
.62	15.748	1.62	41.148	2.62	66.548	3.62	91.948	4.62	117.348	5.62	142.748	6.62	168.148	7.62	193.548	8.62	218.948	9.62	244.348
.63	16.002	1.63	41.402	2.63	66.802	3.63	92.202	4.63	117.602	5.63	143.002	6.63	168.402	7.63	193.802	8.63	219.202	9.63	244.602
.64	16.256	1.64	41.656	2.64	67.056	3.64	92.456	4.64	117.856	5.64	143.256	6.64	168.656	7.64	194.056	8.64	219.456	9.64	244.856
.65	16.510	1.65	41.910	2.65	67.310	3.65	92.710	4.65	118.110	5.65	143.510	6.65	168.910	7.65	194.310	8.65	219.710	9.65	245.110
.66	16.764	1.66	42.164	2.66	67.564	3.66	92.964	4.66	118.364	5.66	143.764	6.66	169.164	7.66	194.564	8.66	219.964	9.66	245.364
.67	17.018	1.67	42.418	2.67	67.818	3.67	93.218	4.67	118.618	5.67	144.018	6.67	169.418	7.67	194.818	8.67	220.218	9.67	245.618
.68	17.272	1.68	42.672	2.68	68.072	3.68	93.472	4.68	118.872	5.68	144.272	6.68	169.672	7.68	195.072	8.68	220.472	9.68	245.872
.69	17.526	1.69	42.926	2.69	68.326	3.69	93.726	4.69	119.126	5.69	144.526	6.69	169.926	7.69	195.326	8.69	220.726	9.69	246.126
0.70	17.780	1.70	43.180	2.70	68.580	3.70	93.980	4.70	119.380	5.70	144.780	6.70	170.180	7.70	195.580	8.70	220.980	9.70	246.380
.71	18.034	1.71	43.434	2.71	68.834	3.71	94.234	4.71	119.634	5.71	145.034	6.71	170.434	7.71	195.834	8.71	221.234	9.71	246.634
.72	18.288	1.72	43.688	2.72	69.088	3.72	94.488	4.72	119.888	5.72	145.288	6.72	170.688	7.72	196.088	8.72	221.488	9.72	246.888
.73	18.542	1.73	43.942	2.73	69.342	3.73	94.742	4.73	120.142	5.73	145.542	6.73	170.942	7.73	196.342	8.73	221.742	9.73	247.142
.74	18.796	1.74	44.196	2.74	69.596	3.74	94.996	4.74	120.396	5.74	145.796	6.74	171.196	7.74	196.596	8.74	221.996	9.74	247.396
.75	19.050	1.75	44.450	2.75	69.850	3.75	95.250	4.75	120.650	5.75	146.050	6.75	171.450	7.75	196.850	8.75	222.250	9.75	247.650
.76	19.304	1.76	44.704	2.76	70.104	3.76	95.504	4.76	120.904	5.76	146.304	6.76	171.704	7.76	197.104	8.76	222.504	9.76	247.904
.77	19.558	1.77	44.958	2.77	70.358	3.77	95.758	4.77	121.158	5.77	146.558	6.77	171.958	7.77	197.358	8.77	222.758	9.77	248.158
.78	19.812	1.78	45.212	2.78	70.612	3.78	96.012	4.78	121.412	5.78	146.812	6.78	172.212	7.78	197.612	8.78	223.012	9.78	248.412
.79	20.066	1.79	45.466	2.79	70.866	3.79	96.266	4.79	121.666	5.79	147.066	6.79	172.466	7.79	197.866	8.79	223.266	9.79	248.666
0.80	20.320	1.80	45.720	2.80	71.120	3.80	96.520	4.80	121.920	5.80	147.320	6.80	172.720	7.80	198.120	8.80	223.520	9.80	248.920
.81	20.574	1.81	45.974	2.81	71.374	3.81	96.774	4.81	122.174	5.81	147.574	6.81	172.974	7.81	198.374	8.81	223.774	9.81	249.174
.82	20.828	1.82	46.228	2.82	71.628	3.82	97.028	4.82	122.428	5.82	147.828	6.82	173.228	7.82	198.628	8.82	224.028	9.82	249.428
.83	21.082	1.83	46.482	2.83	71.882	3.83	97.282	4.83	122.682	5.83	148.082	6.83	173.482	7.83	198.882	8.83	224.282	9.83	249.682
.84	21.336	1.84	46.736	2.84	72.136	3.84	97.536	4.84	122.936	5.84	148.336	6.84	173.736	7.84	199.136	8.84	224.536	9.84	249.936
.85	21.590	1.85	46.990	2.85	72.390	3.85	97.790	4.85	123.190	5.85	148.590	6.85	173.990	7.85	199.390	8.85	224.790	9.85	250.190
.86	21.844	1.86	47.244	2.86	72.644	3.86	98.044	4.86	123.444	5.86	148.844	6.86	174.244	7.86	199.644	8.86	225.044	9.86	250.444
.87	22.098	1.87	47.498	2.87	72.898	3.87	98.298	4.87	123.698	5.87	149.098	6.87	174.498	7.87	199.898	8.87	225.298	9.87	250.698
.88	22.352	1.88	47.752	2.88	73.152	3.88	98.552	4.88	123.952	5.88	149.352	6.88	174.752	7.88	200.152	8.88	225.552	9.88	250.952
.89	22.606	1.89	48.006	2.89	73.406	3.89	98.806	4.89	124.206	5.89	149.606	6.89	175.006	7.89	200.406	8.89	225.806	9.89	251.206
0.90	22.860	1.90	48.260	2.90	73.660	3.90	99.060	4.90	124.460	5.90	149.860	6.90	175.260	7.90	200.660	8.90	226.060	9.90	251.460
.91	23.114	1.91	48.514	2.91	73.914	3.91	99.314	4.91	124.714	5.91	150.114	6.91	175.514	7.91	200.914	8.91	226.314	9.91	251.714
.92	23.368	1.92	48.768	2.92	74.168	3.92	99.568	4.92	124.968	5.92	150.368	6.92	175.768	7.92	201.168	8.92	226.568	9.92	251.968
.93	23.622	1.93	49.022	2.93	74.422	3.93	99.822	4.93	125.222	5.93	150.622	6.93	176.022	7.93	201.422	8.93	226.822	9.93	252.222
.94	23.876	1.94	49.276	2.94	74.676	3.94	100.076	4.94	125.476	5.94	150.876	6.94	176.276	7.94	201.676	8.94	227.076	9.94	252.476
.95	24.130	1.95	49.530	2.95	74.930	3.95	100.330	4.95	125.730	5.95	151.130	6.95	176.530	7.95	201.930	8.95	227.330	9.95	252.730
.96	24.384	1.96	49.784	2.96	75.184	3.96	100.584	4.96	125.984	5.96	151.384	6.96	176.784	7.96	202.184	8.96	227.584	9.96	252.984
.97	24.638	1.97	50.038	2.97	75.438	3.97	100.838	4.97	126.238	5.97	151.638	6.97	177.038	7.97	202.438	8.97	227.838	9.97	253.238
.98	24.892	1.98	50.292	2.98	75.692	3.98	101.092	4.98	126.492	5.98	151.892	6.98	177.292	7.98	202.692	8.98	228.092	9.98	253.492
.99	25.146	1.99	50.546	2.99	75.946	3.99	101.346	4.99	126.746	5.99	152.146	6.99	177.546	7.99	202.946	8.99	228.346	9.99	253.746

8.6. LENGTH—INCHES TO MILLIMETERS—Continued

[Reduction Factor: 1 inch = 25.4 millimeters]

Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters
10.00	254.000	11.00	279.400	12.00	304.800	13.00	330.200	14.00	355.600	15.00	381.000	16.00	406.400	17.00	431.800	18.00	457.200	19.00	482.600
10.01	254.254	11.01	279.654	12.01	305.054	13.01	330.454	14.01	355.854	15.01	381.254	16.01	406.654	17.01	432.054	18.01	457.454	19.01	482.854
10.02	254.508	11.02	279.908	12.02	305.308	13.02	330.708	14.02	356.108	15.02	381.508	16.02	406.908	17.02	432.308	18.02	457.708	19.02	483.108
10.03	254.762	11.03	280.162	12.03	305.562	13.03	330.962	14.03	356.362	15.03	381.762	16.03	407.162	17.03	432.562	18.03	457.962	19.03	483.362
10.04	255.016	11.04	280.416	12.04	305.816	13.04	331.216	14.04	356.616	15.04	382.016	16.04	407.416	17.04	432.816	18.04	458.216	19.04	483.616
10.05	255.270	11.05	280.670	12.05	306.070	13.05	331.470	14.05	356.870	15.05	382.270	16.05	407.670	17.05	433.070	18.05	458.470	19.05	483.870
10.06	255.524	11.06	280.924	12.06	306.324	13.06	331.724	14.06	357.124	15.06	382.524	16.06	407.924	17.06	433.324	18.06	458.724	19.06	484.124
10.07	255.778	11.07	281.178	12.07	306.578	13.07	331.978	14.07	357.378	15.07	382.778	16.07	408.178	17.07	433.578	18.07	458.978	19.07	484.378
10.08	256.032	11.08	281.432	12.08	306.832	13.08	332.232	14.08	357.632	15.08	383.032	16.08	408.432	17.08	433.832	18.08	459.232	19.08	484.632
10.09	256.286	11.09	281.686	12.09	307.086	13.09	332.486	14.09	357.886	15.09	383.286	16.09	408.686	17.09	434.086	18.09	459.486	19.09	484.886
10.10	256.540	11.10	281.940	12.10	307.340	13.10	332.740	14.10	358.140	15.10	383.540	16.10	408.940	17.10	434.340	18.10	459.740	19.10	485.140
10.11	256.794	11.11	282.194	12.11	307.594	13.11	332.994	14.11	358.394	15.11	383.794	16.11	409.194	17.11	434.594	18.11	459.994	19.11	485.394
10.12	257.048	11.12	282.448	12.12	307.848	13.12	333.248	14.12	358.648	15.12	384.048	16.12	409.448	17.12	434.848	18.12	460.248	19.12	485.648
10.13	257.302	11.13	282.702	12.13	308.102	13.13	333.502	14.13	358.902	15.13	384.302	16.13	409.702	17.13	435.102	18.13	460.502	19.13	485.902
10.14	257.556	11.14	282.956	12.14	308.356	13.14	333.756	14.14	359.156	15.14	384.556	16.14	409.956	17.14	435.356	18.14	460.756	19.14	486.156
10.15	257.810	11.15	283.210	12.15	308.610	13.15	334.010	14.15	359.410	15.15	384.810	16.15	410.210	17.15	435.610	18.15	461.010	19.15	486.410
10.16	258.064	11.16	283.464	12.16	308.864	13.16	334.264	14.16	359.664	15.16	385.064	16.16	410.464	17.16	435.864	18.16	461.264	19.16	486.664
10.17	258.318	11.17	283.718	12.17	309.118	13.17	334.518	14.17	359.918	15.17	385.318	16.17	410.718	17.17	436.118	18.17	461.518	19.17	486.918
10.18	258.572	11.18	283.972	12.18	309.372	13.18	334.772	14.18	360.172	15.18	385.572	16.18	410.972	17.18	436.372	18.18	461.772	19.18	487.172
10.19	258.826	11.19	284.226	12.19	309.626	13.19	335.026	14.19	360.426	15.19	385.826	16.19	411.226	17.19	436.626	18.19	462.026	19.19	487.426
10.20	259.080	11.20	284.480	12.20	309.880	13.20	335.280	14.20	360.680	15.20	386.080	16.20	411.480	17.20	436.880	18.20	462.280	19.20	487.680
10.21	259.334	11.21	284.734	12.21	310.134	13.21	335.534	14.21	360.934	15.21	386.334	16.21	411.734	17.21	437.134	18.21	462.534	19.21	487.934
10.22	259.588	11.22	284.988	12.22	310.388	13.22	335.788	14.22	361.188	15.22	386.588	16.22	411.988	17.22	437.388	18.22	462.788	19.22	488.188
10.23	259.842	11.23	285.242	12.23	310.642	13.23	336.042	14.23	361.442	15.23	386.842	16.23	412.242	17.23	437.642	18.23	463.042	19.23	488.442
10.24	260.096	11.24	285.496	12.24	310.896	13.24	336.296	14.24	361.696	15.24	387.096	16.24	412.496	17.24	437.896	18.24	463.296	19.24	488.696
10.25	260.350	11.25	285.750	12.25	311.150	13.25	336.550	14.25	361.950	15.25	387.350	16.25	412.750	17.25	438.150	18.25	463.550	19.25	488.950
10.26	260.604	11.26	286.004	12.26	311.404	13.26	336.804	14.26	362.204	15.26	387.604	16.26	413.004	17.26	438.404	18.26	463.804	19.26	489.204
10.27	260.858	11.27	286.258	12.27	311.658	13.27	337.058	14.27	362.458	15.27	387.858	16.27	413.258	17.27	438.658	18.27	464.058	19.27	489.458
10.28	261.112	11.28	286.512	12.28	311.912	13.28	337.312	14.28	362.712	15.28	388.112	16.28	413.512	17.28	438.912	18.28	464.312	19.28	489.712
10.29	261.366	11.29	286.766	12.29	312.166	13.29	337.566	14.29	362.966	15.29	388.366	16.29	413.766	17.29	439.166	18.29	464.566	19.29	489.966
10.30	261.620	11.30	287.020	12.30	312.420	13.30	337.820	14.30	363.220	15.30	388.620	16.30	414.020	17.30	439.420	18.30	464.820	19.30	490.220
10.31	261.874	11.31	287.274	12.31	312.674	13.31	338.074	14.31	363.474	15.31	388.874	16.31	414.274	17.31	439.674	18.31	465.074	19.31	490.474
10.32	262.128	11.32	287.528	12.32	312.928	13.32	338.328	14.32	363.728	15.32	389.128	16.32	414.528	17.32	439.928	18.32	465.328	19.32	490.728
10.33	262.382	11.33	287.782	12.33	313.182	13.33	338.582	14.33	363.982	15.33	389.382	16.33	414.782	17.33	440.182	18.33	465.582	19.33	490.982
10.34	262.636	11.34	288.036	12.34	313.436	13.34	338.836	14.34	364.236	15.34	389.636	16.34	415.036	17.34	440.436	18.34	465.836	19.34	491.236
10.35	262.890	11.35	288.290	12.35	313.690	13.35	339.090	14.35	364.490	15.35	389.890	16.35	415.290	17.35	440.690	18.35	466.090	19.35	491.490
10.36	263.144	11.36	288.544	12.36	313.944	13.36	339.344	14.36	364.744	15.36	390.144	16.36	415.544	17.36	440.944	18.36	466.344	19.36	491.744
10.37	263.398	11.37	288.798	12.37	314.198	13.37	339.598	14.37	364.998	15.37	390.398	16.37	415.798	17.37	441.198	18.37	466.598	19.37	491.998
10.38	263.652	11.38	289.052	12.38	314.452	13.38	339.852	14.38	365.252	15.38	390.652	16.38	416.052	17.38	441.452	18.38	466.852	19.38	492.252
10.39	263.906	11.39	289.306	12.39	314.706	13.39	340.106	14.39	365.506	15.39	390.906	16.39	416.306	17.39	441.706	18.39	467.106	19.39	492.506
10.40	264.160	11.40	289.560	12.40	314.960	13.40	340.360	14.40	365.760	15.40	391.160	16.40	416.560	17.40	441.960	18.40	467.360	19.40	492.760
10.41	264.414	11.41	289.814	12.41	315.214	13.41	340.614	14.41	366.014	15.41	391.414	16.41	416.814	17.41	442.214	18.41	467.614	19.41	493.014
10.42	264.668	11.42	290.068	12.42	315.468	13.42	340.868	14.42	366.268	15.42	391.668	16.42	417.068	17.42	442.468	18.42	467.868	19.42	493.268
10.43	264.922	11.43	290.322	12.43	315.722	13.43	341.122	14.43	366.522	15.43	391.922	16.43	417.322	17.43	442.722	18.43	468.122	19.43	493.522
10.44	265.176	11.44	290.576	12.44	315.976	13.44	341.376	14.44	366.776	15.44	392.176	16.44	417.576	17.44	442.976	18.44	468.376	19.44	493.776
10.45	265.430	11.45	290.830	12.45	316.230	13.45	341.630	14.45	367.030	15.45	392.430	16.45	417.830	17.45	443.230	18.45	468.630	19.45	494.030
10.46	265.684	11.46	291.084	12.46	316.484	13.46	341.884	14.46	367.284	15.46	392.684	16.46	418.084	17.46	443.484	18.46	468.884	19.46	494.284
10.47	265.938	11.47	291.338	12.47	316.738	13.47	342.138	14.47	367.538	15.47	392.938	16.47	418.338	17.47	443.738	18.47	469.138	19.47	494.538
10.48	266.192	11.48	291.592	12.48	316.992	13.48	342.392	14.48	367.792	15.48	393.192	16.48	418.592	17.48	443.992	18.48	469.392	19.48	494.792
10.49	266.446	11.49	291.846	12.49	317.246	13.49	342.646	14.49	368.046	15.49	393.446	16.49	418.846	17.49	444.246	18.49	469.646	19.49	495.046

10.50	266.700	11.50	292.100	12.50	317.500	13.50	342.900	14.50	368.300	15.50	393.700	16.50	419.100	17.50	444.500	18.50	469.900	19.50	495.300
10.51	266.954	11.51	292.354	12.51	317.754	13.51	343.154	14.51	368.554	15.51	393.954	16.51	419.354	17.51	444.754	18.51	470.154	19.51	495.554
10.52	267.208	11.52	292.608	12.52	318.008	13.52	343.408	14.52	368.808	15.52	394.208	16.52	419.608	17.52	445.008	18.52	470.408	19.52	495.808
10.53	267.462	11.53	292.862	12.53	318.262	13.53	343.662	14.53	369.062	15.53	394.462	16.53	419.862	17.53	445.262	18.53	470.662	19.53	496.062
10.54	267.716	11.54	293.116	12.54	318.516	13.54	343.916	14.54	369.316	15.54	394.716	16.54	420.116	17.54	445.516	18.54	470.916	19.54	496.316
10.55	267.970	11.55	293.370	12.55	318.770	13.55	344.170	14.55	369.570	15.55	394.970	16.55	420.370	17.55	445.770	18.55	471.170	19.55	496.570
10.56	268.224	11.56	293.624	12.56	319.024	13.56	344.424	14.56	369.824	15.56	395.224	16.56	420.624	17.56	446.024	18.56	471.424	19.56	496.824
10.57	268.478	11.57	293.878	12.57	319.278	13.57	344.678	14.57	370.078	15.57	395.478	16.57	420.878	17.57	446.278	18.57	471.678	19.57	497.078
10.58	268.732	11.58	294.132	12.58	319.532	13.58	344.932	14.58	370.332	15.58	395.732	16.58	421.132	17.58	446.532	18.58	471.932	19.58	497.332
10.59	268.986	11.59	294.386	12.59	319.786	13.59	345.186	14.59	370.586	15.59	395.986	16.59	421.386	17.59	446.786	18.59	472.186	19.59	497.586
10.60	269.240	11.60	294.640	12.60	320.040	13.60	345.440	14.60	370.840	15.60	396.240	16.60	421.640	17.60	447.040	18.60	472.440	19.60	497.840
10.61	269.494	11.61	294.894	12.61	320.294	13.61	345.694	14.61	371.094	15.61	396.494	16.61	421.894	17.61	447.294	18.61	472.694	19.61	498.094
10.62	269.748	11.62	295.148	12.62	320.548	13.62	345.948	14.62	371.348	15.62	396.748	16.62	422.148	17.62	447.548	18.62	472.948	19.62	498.348
10.63	270.002	11.63	295.402	12.63	320.802	13.63	346.202	14.63	371.602	15.63	397.002	16.63	422.402	17.63	447.802	18.63	473.202	19.63	498.602
10.64	270.256	11.64	295.656	12.64	321.056	13.64	346.456	14.64	371.856	15.64	397.256	16.64	422.656	17.64	448.056	18.64	473.456	19.64	498.856
10.65	270.510	11.65	295.910	12.65	321.310	13.65	346.710	14.65	372.110	15.65	397.510	16.65	422.910	17.65	448.310	18.65	473.710	19.65	499.110
10.66	270.764	11.66	296.164	12.66	321.564	13.66	346.964	14.66	372.364	15.66	397.764	16.66	423.164	17.66	448.564	18.66	473.964	19.66	499.364
10.67	271.018	11.67	296.418	12.67	321.818	13.67	347.218	14.67	372.618	15.67	398.018	16.67	423.418	17.67	448.818	18.67	474.218	19.67	499.618
10.68	271.272	11.68	296.672	12.68	322.072	13.68	347.472	14.68	372.872	15.68	398.272	16.68	423.672	17.68	449.072	18.68	474.472	19.68	499.872
10.69	271.526	11.69	296.926	12.69	322.326	13.69	347.726	14.69	373.126	15.69	398.526	16.69	423.926	17.69	449.326	18.69	474.726	19.69	500.126
10.70	271.780	11.70	297.180	12.70	322.580	13.70	347.980	14.70	373.380	15.70	398.780	16.70	424.180	17.70	449.580	18.70	474.980	19.70	500.380
10.71	272.034	11.71	297.434	12.71	322.834	13.71	348.234	14.71	373.634	15.71	399.034	16.71	424.434	17.71	449.834	18.71	475.234	19.71	500.634
10.72	272.288	11.72	297.688	12.72	323.088	13.72	348.488	14.72	373.888	15.72	399.288	16.72	424.688	17.72	450.088	18.72	475.488	19.72	500.888
10.73	272.542	11.73	297.942	12.73	323.342	13.73	348.742	14.73	374.142	15.73	399.542	16.73	424.942	17.73	450.342	18.73	475.742	19.73	501.142
10.74	272.796	11.74	298.196	12.74	323.596	13.74	348.996	14.74	374.396	15.74	399.796	16.74	425.196	17.74	450.596	18.74	475.996	19.74	501.396
10.75	273.050	11.75	298.450	12.75	323.850	13.75	349.250	14.75	374.650	15.75	400.050	16.75	425.450	17.75	450.850	18.75	476.250	19.75	501.650
10.76	273.304	11.76	298.704	12.76	324.104	13.76	349.504	14.76	374.904	15.76	400.304	16.76	425.704	17.76	451.104	18.76	476.504	19.76	501.904
10.77	273.558	11.77	298.958	12.77	324.358	13.77	349.758	14.77	375.158	15.77	400.558	16.77	425.958	17.77	451.358	18.77	476.758	19.77	502.158
10.78	273.812	11.78	299.212	12.78	324.612	13.78	350.012	14.78	375.412	15.78	400.812	16.78	426.212	17.78	451.612	18.78	477.012	19.78	502.412
10.79	274.066	11.79	299.466	12.79	324.866	13.79	350.266	14.79	375.666	15.79	401.066	16.79	426.466	17.79	451.866	18.79	477.266	19.79	502.666
10.80	274.320	11.80	299.720	12.80	325.120	13.80	350.520	14.80	375.920	15.80	401.320	16.80	426.720	17.80	452.120	18.80	477.520	19.80	502.920
10.81	274.574	11.81	299.974	12.81	325.374	13.81	350.774	14.81	376.174	15.81	401.574	16.81	426.974	17.81	452.374	18.81	477.774	19.81	503.174
10.82	274.828	11.82	300.228	12.82	325.628	13.82	351.028	14.82	376.428	15.82	401.828	16.82	427.228	17.82	452.628	18.82	478.028	19.82	503.428
10.83	275.082	11.83	300.482	12.83	325.882	13.83	351.282	14.83	376.682	15.83	402.082	16.83	427.482	17.83	452.882	18.83	478.282	19.83	503.682
10.84	275.336	11.84	300.736	12.84	326.136	13.84	351.536	14.84	376.936	15.84	402.336	16.84	427.736	17.84	453.136	18.84	478.536	19.84	503.936
10.85	275.590	11.85	300.990	12.85	326.390	13.85	351.790	14.85	377.190	15.83	402.590	16.85	427.990	17.85	453.390	18.85	478.790	19.85	504.190
10.86	275.844	11.86	301.244	12.86	326.644	13.86	352.044	14.86	377.444	15.86	402.844	16.86	428.244	17.86	453.644	18.86	479.044	19.86	504.444
10.87	276.098	11.87	301.498	12.87	326.898	13.87	352.298	14.87	377.698	15.87	403.098	16.87	428.498	17.87	453.898	18.87	479.298	19.87	504.698
10.88	276.352	11.88	301.752	12.88	327.152	13.88	352.552	14.88	377.952	15.88	403.352	16.88	428.752	17.88	454.152	18.88	479.552	19.88	504.952
10.89	276.606	11.89	302.006	12.89	327.406	13.89	352.806	14.89	378.206	15.89	403.606	16.89	429.006	17.89	454.406	18.89	479.806	19.89	505.206
10.90	276.860	11.90	302.260	12.90	327.660	13.90	353.060	14.90	378.460	15.90	403.860	16.90	429.260	17.90	454.660	18.90	480.060	19.90	505.460
10.91	277.114	11.91	302.514	12.91	327.914	13.91	353.314	14.91	378.714	15.91	404.114	16.91	429.514	17.91	454.914	18.91	480.314	19.91	505.714
10.92	277.368	11.92	302.768	12.92	328.168	13.92	353.568	14.92	378.968	15.92	404.368	16.92	429.768	17.92	455.168	18.92	480.568	19.92	505.968
10.93	277.622	11.93	303.022	12.93	328.422	13.93	353.822	14.93	379.222	15.93	404.622	16.93	430.022	17.93	455.422	18.93	480.822	19.93	506.222
10.94	277.876	11.94	303.276	12.94	328.676	13.94	354.076	14.94	379.476	15.94	404.876	16.94	430.276	17.94	455.676	18.94	481.076	19.94	506.476
10.95	278.130	11.95	303.530	12.95	328.930	13.95	354.330	14.95	379.730	15.95	405.130	16.95	430.530	17.95	455.930	18.95	481.330	19.95	506.730
10.96	278.384	11.96	303.784	12.96	329.184	13.96	354.584	14.96	379.984	15.96	405.384	16.96	430.784	17.96	456.184	18.96	481.584	19.96	506.984
10.97	278.638	11.97	304.038	12.97	329.438	13.97	354.838	14.97	380.238	15.97	405.638	16.97	431.038	17.97	456.438	18.97	481.838	19.97	507.238
10.98	278.892	11.98	304.292	12.98	329.692	13.98	355.092	14.98	380.492	15.98	405.892	16.98	431.292	17.98	456.692	18.98	482.092	19.98	507.492
10.99	279.146	11.99	304.546	12.99	329.946	13.99	355.346	14.99	380.746	15.99	406.146	16.99	431.546	17.99	456.946	18.99	482.346	19.99	507.746

8.7. LENGTH—MILLIMETERS TO INCHES

[Reduction Factor: 1 millimeter = 0.039 370 08 inch]

Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inhces	Millimeters	Inches
0.00		1.00	0.03937	2.00	0.07874	3.00	0.11811	4.00	0.15748	5.00	0.19685	6.00	0.23622	7.00	0.27559	8.00	0.31496	9.00	0.35433
.01	0.000394	1.01	.03976	2.01	.07913	3.01	.11850	4.01	.15787	5.01	.19724	6.01	.23661	7.01	.27598	8.01	.31535	9.01	.35472
.02	.000787	1.02	.04016	2.02	.07953	3.02	.11890	4.02	.15827	5.02	.19764	6.02	.23701	7.02	.27638	8.02	.31575	9.02	.35512
.03	.001181	1.03	.04055	2.03	.07992	3.03	.11929	4.03	.15866	5.03	.19803	6.03	.23740	7.03	.27677	8.03	.31614	9.03	.35551
.04	.001575	1.04	.04094	2.04	.08031	3.04	.11969	4.04	.15906	5.04	.19843	6.04	.23780	7.04	.27717	8.04	.31654	9.04	.35591
.05	.001969	1.05	.04134	2.05	.08071	3.05	.12008	4.05	.15945	5.05	.19882	6.05	.23819	7.05	.27756	8.05	.31693	9.05	.35630
.06	.002362	1.06	.04173	2.06	.08110	3.06	.12047	4.06	.15984	5.06	.19921	6.06	.23858	7.06	.27795	8.06	.31732	9.06	.35669
.07	.002756	1.07	.04213	2.07	.08150	3.07	.12087	4.07	.16024	5.07	.19961	6.07	.23898	7.07	.27835	8.07	.31772	9.07	.35709
.08	.003150	1.08	.04252	2.08	.08189	3.08	.12126	4.08	.16063	5.08	.20000	6.08	.23937	7.08	.27874	8.08	.31811	9.08	.35748
.09	.003543	1.09	.04291	2.09	.08228	3.09	.12165	4.09	.16102	5.09	.20039	6.09	.23976	7.09	.27913	8.09	.31850	9.09	.35787
0.10	0.003937	1.10	0.04331	2.10	0.08268	3.10	0.12205	4.10	0.16142	5.10	0.20079	6.10	0.24016	7.10	0.27953	8.10	0.31890	9.10	0.35827
.11	.004331	1.11	.04370	2.11	.08307	3.11	.12244	4.11	.16181	5.11	.20118	6.11	.24055	7.11	.27992	8.11	.31929	9.11	.35866
.12	.004724	1.12	.04409	2.12	.08346	3.12	.12283	4.12	.16220	5.12	.20157	6.12	.24094	7.12	.28031	8.12	.31969	9.12	.35906
.13	.005118	1.13	.04449	2.13	.08386	3.13	.12323	4.13	.16260	5.13	.20197	6.13	.24134	7.13	.28071	8.13	.32008	9.13	.35945
.14	.005512	1.14	.04488	2.14	.08425	3.14	.12362	4.14	.16299	5.14	.20236	6.14	.24173	7.14	.28110	8.14	.32047	9.14	.35984
.15	.005906	1.15	.04528	2.15	.08465	3.15	.12402	4.15	.16339	5.15	.20276	6.15	.24213	7.15	.28150	8.15	.32087	9.15	.36024
.16	.006299	1.16	.04567	2.16	.08504	3.16	.12441	4.16	.16378	5.16	.20315	6.16	.24252	7.16	.28189	8.16	.32126	9.16	.36063
.17	.006693	1.17	.04606	2.17	.08543	3.17	.12480	4.17	.16417	5.17	.20354	6.17	.24291	7.17	.28228	8.17	.32165	9.17	.36102
.18	.007087	1.18	.04646	2.18	.08583	3.18	.12520	4.18	.16457	5.18	.20394	6.18	.24331	7.18	.28268	8.18	.32205	9.18	.36142
.19	.007480	1.19	.04685	2.19	.08622	3.19	.12559	4.19	.16496	5.19	.20433	6.19	.24370	7.19	.28307	8.19	.32244	9.19	.36181
0.20	0.007874	1.20	0.04724	2.20	0.08661	3.20	0.12598	4.20	0.16535	5.20	0.20472	6.20	0.24409	7.20	0.28346	8.20	0.32283	9.20	0.36220
.21	.008268	1.21	.04764	2.21	.08701	3.21	.12638	4.21	.16575	5.21	.20512	6.21	.24449	7.21	.28386	8.21	.32323	9.21	.36260
.22	.008661	1.22	.04803	2.22	.08740	3.22	.12677	4.22	.16614	5.22	.20551	6.22	.24488	7.22	.28425	8.22	.32362	9.22	.36299
.23	.009055	1.23	.04843	2.23	.08780	3.23	.12717	4.23	.16654	5.23	.20591	6.23	.24528	7.23	.28465	8.23	.32402	9.23	.36339
.24	.009449	1.24	.04882	2.24	.08819	3.24	.12756	4.24	.16693	5.24	.20630	6.24	.24567	7.24	.28504	8.24	.32441	9.24	.36378
.25	.009843	1.25	.04921	2.25	.08858	3.25	.12795	4.25	.16732	5.25	.20669	6.25	.24606	7.25	.28543	8.25	.32480	9.25	.36417
.26	.010236	1.26	.04961	2.26	.08898	3.26	.12835	4.26	.16772	5.26	.20709	6.26	.24646	7.26	.28583	8.26	.32520	9.26	.36457
.27	.010630	1.27	.05000	2.27	.08937	3.27	.12874	4.27	.16811	5.27	.20748	6.27	.24685	7.27	.28622	8.27	.32559	9.27	.36496
.28	.011024	1.28	.05039	2.28	.08976	3.28	.12913	4.28	.16850	5.28	.20787	6.28	.24724	7.28	.28661	8.28	.32598	9.28	.36535
.29	.011417	1.29	.05079	2.29	.09016	3.29	.12953	4.29	.16890	5.29	.20827	6.29	.24764	7.29	.28701	8.29	.32638	9.29	.36575
0.30	0.011811	1.30	0.05118	2.30	0.09055	3.30	0.12992	4.30	0.16929	5.30	0.20866	6.30	0.24803	7.30	0.28740	8.30	0.32677	9.30	0.36614
.31	.012205	1.31	.05157	2.31	.09094	3.31	.13031	4.31	.16969	5.31	.20906	6.31	.24843	7.31	.28780	8.31	.32717	9.31	.36654
.32	.012598	1.32	.05197	2.32	.09134	3.32	.13071	4.32	.17008	5.32	.20945	6.32	.24882	7.32	.28819	8.32	.32756	9.32	.36693
.33	.012992	1.33	.05236	2.33	.09173	3.33	.13110	4.33	.17047	5.33	.20984	6.33	.24921	7.33	.28858	8.33	.32795	9.33	.36732
.34	.013386	1.34	.05276	2.34	.09213	3.34	.13150	4.34	.17087	5.34	.21024	6.34	.24961	7.34	.28898	8.34	.32835	9.34	.36772
.35	.013780	1.35	.05315	2.35	.09252	3.35	.13189	4.35	.17126	5.35	.21063	6.35	.25000	7.35	.28937	8.35	.32874	9.35	.36811
.36	.014173	1.36	.05354	2.36	.09291	3.36	.13228	4.36	.17165	5.36	.21102	6.36	.25039	7.36	.28976	8.36	.32913	9.36	.36850
.37	.014567	1.37	.05394	2.37	.09331	3.37	.13268	4.37	.17205	5.37	.21142	6.37	.25079	7.37	.29016	8.37	.32953	9.37	.36890
.38	.014961	1.38	.05433	2.38	.09370	3.38	.13307	4.38	.17244	5.38	.21181	6.38	.25118	7.38	.29055	8.38	.32992	9.38	.36929
.39	.015354	1.39	.05472	2.39	.09409	3.39	.13346	4.39	.17283	5.39	.21220	6.39	.25157	7.39	.29094	8.39	.33031	9.39	.36969
0.40	0.015748	1.40	0.05512	2.40	0.09449	3.40	0.13386	4.40	0.17323	5.40	0.21260	6.40	0.25197	7.40	0.29134	8.40	0.33071	9.40	0.37008
.41	.016142	1.41	.05551	2.41	.09488	3.41	.13425	4.41	.17362	5.41	.21299	6.41	.25236	7.41	.29173	8.41	.33110	9.41	.37047
.42	.016535	1.42	.05591	2.42	.09528	3.42	.13465	4.42	.17402	5.42	.21339	6.42	.25276	7.42	.29213	8.42	.33150	9.42	.37087
.43	.016929	1.43	.05630	2.43	.09567	3.43	.13504	4.43	.17441	5.43	.21378	6.43	.25315	7.43	.29252	8.43	.33189	9.43	.37126
.44	.017323	1.44	.05669	2.44	.09606	3.44	.13543	4.44	.17480	5.44	.21417	6.44	.25354	7.44	.29291	8.44	.33228	9.44	.37165
.45	.017717	1.45	.05709	2.45	.09646	3.45	.13583	4.45	.17520	5.45	.21457	6.45	.25394	7.45	.29331	8.45	.33268	9.45	.37205
.46	.018110	1.46	.05748	2.46	.09685	3.46	.13622	4.46	.17559	5.46	.21496	6.46	.25433	7.46	.29370	8.46	.33307	9.46	.37244
.47	.018504	1.47	.05787	2.47	.09724	3.47	.13661	4.47	.17598	5.47	.21535	6.47	.25472	7.47	.29409	8.47	.33346	9.47	.37283
.48	.018898	1.48	.05827	2.48	.09764	3.48	.13701	4.48	.17638	5.48	.21575	6.48	.25512	7.48	.29449	8.48	.33386	9.48	.37323
.49	.019291	1.49	.05866	2.49	.09803	3.49	.13740	4.49	.17677	5.49	.21614	6.49	.25551	7.49	.29488	8.49	.33425	9.49	.37362

0.50	0.019685	1.50	0.05906	2.50	0.09843	3.50	0.13780	4.50	0.17717	5.50	0.21654	6.50	0.25591	7.50	0.29528	8.50	0.33465	9.50	0.37402
.51	.020079	1.51	.05945	2.51	.09882	3.51	.13819	4.51	.17756	5.51	.21693	6.51	.25630	7.51	.29567	8.51	.33504	9.51	.37441
.52	.020472	1.52	.05984	2.52	.09921	3.52	.13858	4.52	.17795	5.52	.21732	6.52	.25669	7.52	.29606	8.52	.33543	9.52	.37480
.53	.020866	1.53	.06024	2.53	.09961	3.53	.13898	4.53	.17835	5.53	.21772	6.53	.25709	7.53	.29646	8.53	.33583	9.53	.37520
.54	.021260	1.54	.06063	2.54	.10000	3.54	.13937	4.54	.17874	5.54	.21811	6.54	.25748	7.54	.29685	8.54	.33622	9.54	.37559
.55	.021654	1.55	.06102	2.55	.10039	3.55	.13976	4.55	.17913	5.55	.21850	6.55	.25787	7.55	.29724	8.55	.33661	9.55	.37598
.56	.022047	1.56	.06142	2.56	.10079	3.56	.14016	4.56	.17953	5.56	.21890	6.56	.25827	7.56	.29764	8.56	.33701	9.56	.37638
.57	.022441	1.57	.06181	2.57	.10118	3.57	.14055	4.57	.17992	5.57	.21929	6.57	.25866	7.57	.29803	8.57	.33740	9.57	.37677
.58	.022835	1.58	.06220	2.58	.10157	3.58	.14094	4.58	.18031	5.58	.21969	6.58	.25906	7.58	.29843	8.58	.33780	9.58	.37717
.59	.023228	1.59	.06260	2.59	.10197	3.59	.14134	4.59	.18071	5.59	.22008	6.59	.25945	7.59	.29882	8.59	.33819	9.59	.37756
0.60	0.023622	1.60	0.06299	2.60	0.10236	3.60	0.14173	4.60	0.18110	5.60	0.22047	6.60	0.25984	7.60	0.29921	8.60	0.33858	9.60	0.37795
.61	.024016	1.61	.06339	2.61	.10276	3.61	.14213	4.61	.18150	5.61	.20087	6.61	.26024	7.61	.29961	8.61	.33898	9.61	.37835
.62	.024409	1.62	.06378	2.62	.10315	3.62	.14252	4.62	.18189	5.62	.22126	6.62	.26063	7.62	.30000	8.62	.33937	9.62	.37874
.63	.024803	1.63	.06417	2.63	.10354	3.63	.14291	4.63	.18228	5.63	.22165	6.63	.26102	7.63	.30039	8.63	.33976	9.63	.37913
.64	.025197	1.64	.06457	2.64	.10394	3.64	.14331	4.64	.18268	5.64	.22205	6.64	.26142	7.64	.30079	8.64	.34016	9.64	.37953
.65	.025591	1.65	.06496	2.65	.10433	3.65	.14370	4.65	.18307	5.65	.22244	6.65	.26181	7.65	.30118	8.65	.34055	9.65	.37992
.66	.025984	1.66	.06535	2.66	.10472	3.66	.14409	4.66	.18346	5.66	.22283	6.66	.26220	7.66	.30157	8.66	.34094	9.66	.38031
.67	.026378	1.67	.06575	2.67	.10512	3.67	.14449	4.67	.18386	5.67	.22323	6.67	.26260	7.67	.30197	8.67	.34134	9.67	.38071
.68	.026772	1.68	.06614	2.68	.10551	3.68	.14488	4.68	.18425	5.68	.22362	6.68	.26299	7.68	.30236	8.68	.34173	9.68	.38110
.69	.027165	1.69	.06654	2.69	.10591	3.69	.14528	4.69	.18465	5.69	.22402	6.69	.26339	7.69	.30276	8.69	.34213	9.69	.38150
0.70	0.027559	1.70	0.06693	2.70	0.10630	3.70	0.14567	4.70	0.18504	5.70	0.22441	6.70	0.26378	7.70	0.30315	8.70	0.34252	9.70	0.38189
.71	.027953	1.71	.06732	2.71	.10669	3.71	.14606	4.71	.18543	5.71	.22480	6.71	.26417	7.71	.30354	8.71	.34291	9.71	.38228
.72	.028346	1.72	.06772	2.72	.10709	3.72	.14646	4.72	.18583	5.72	.22520	6.72	.26457	7.72	.30394	8.72	.34331	9.72	.38268
.73	.028740	1.73	.06811	2.73	.10748	3.73	.14685	4.73	.18622	5.73	.22559	6.73	.26496	7.73	.30433	8.73	.34370	9.73	.38307
.74	.029134	1.74	.06850	2.74	.10787	3.74	.14724	4.74	.18661	5.74	.22598	6.74	.26535	7.74	.30472	8.74	.34409	9.74	.38346
.75	.029528	1.75	.06890	2.75	.10827	3.75	.14764	4.75	.18701	5.75	.22638	6.75	.26575	7.75	.30512	8.75	.34449	9.75	.38386
.76	.029921	1.76	.06929	2.76	.10866	3.76	.14803	4.76	.18740	5.76	.22677	6.76	.26614	7.76	.30551	8.76	.34488	9.76	.38425
.77	.030315	1.77	.06969	2.77	.10906	3.77	.14843	4.77	.18780	5.77	.22717	6.77	.26654	7.77	.30591	8.77	.34528	9.77	.38465
.78	.030709	1.78	.07008	2.78	.10945	3.78	.14882	4.78	.18819	5.78	.22756	6.78	.26693	7.78	.30630	8.78	.34567	9.78	.38504
.79	.031102	1.79	.07047	2.79	.10984	3.79	.14921	4.79	.18858	5.79	.22795	6.79	.26732	7.79	.30669	8.79	.34606	9.79	.38543
0.80	0.031496	1.80	0.07087	2.80	0.11024	3.80	0.14961	4.80	0.18898	5.80	0.22835	6.80	0.26772	7.80	0.30709	8.80	0.34646	9.80	0.38583
.81	.031890	1.81	.07126	2.81	.11063	3.81	.15000	4.81	.18937	5.81	.22874	6.81	.26811	7.81	.30748	8.81	.34685	9.81	.38622
.82	.032283	1.82	.07165	2.82	.11102	3.82	.15039	4.82	.18976	5.82	.22913	6.82	.26850	7.82	.30787	8.82	.34724	9.82	.38661
.83	.032677	1.83	.07205	2.83	.11142	3.83	.15079	4.83	.19016	5.83	.22953	6.83	.26890	7.83	.30827	8.83	.34764	9.83	.38701
.84	.033071	1.84	.07244	2.84	.11181	3.84	.15118	4.84	.19055	5.84	.22992	6.84	.26929	7.84	.30866	8.84	.34803	9.84	.38740
.85	.033465	1.85	.07283	2.85	.11220	3.85	.15157	4.85	.19094	5.85	.23031	6.85	.26969	7.85	.30906	8.85	.34843	9.85	.38780
.86	.033858	1.86	.07323	2.86	.11260	3.86	.15197	4.86	.19134	5.86	.23071	6.86	.27008	7.86	.30945	8.86	.34882	9.86	.38819
.87	.034252	1.87	.07362	2.87	.11299	3.87	.15236	4.87	.19173	5.87	.23110	6.87	.27047	7.87	.30984	8.87	.34921	9.87	.38858
.88	.034646	1.88	.07402	2.88	.11339	3.88	.15276	4.88	.19213	5.88	.23150	6.88	.27087	7.88	.31024	8.88	.34961	9.88	.38898
.89	.035039	1.89	.07441	2.89	.11378	3.89	.15315	4.89	.19252	5.89	.23189	6.89	.27126	7.89	.31063	8.89	.35000	9.89	.38937
0.90	0.035433	1.90	0.07480	2.90	0.11417	3.90	0.15354	4.90	0.19291	5.90	0.23228	6.90	0.27165	7.90	0.31102	8.90	0.35039	9.90	0.38976
.91	.035827	1.91	.07520	2.91	.11457	3.91	.15394	4.91	.19331	5.91	.23268	6.91	.27205	7.91	.31142	8.91	.35079	9.91	.39016
.92	.036220	1.92	.07559	2.92	.11496	3.92	.15433	4.92	.19370	5.92	.23307	6.92	.27244	7.92	.31181	8.92	.35118	9.92	.39055
.93	.036614	1.93	.07598	2.93	.11535	3.93	.15472	4.93	.19409	5.93	.23346	6.93	.27283	7.93	.31220	8.93	.35157	9.93	.39094
.94	.037008	1.94	.07638	2.94	.11575	3.94	.15512	4.94	.19449	5.94	.23386	6.94	.27323	7.94	.31260	8.94	.35197	9.94	.39134
.95	.037402	1.95	.07677	2.95	.11614	3.95	.15551	4.95	.19488	5.95	.23425	6.95	.27362	7.95	.31299	8.95	.35236	9.95	.39173
.96	.037795	1.96	.07717	2.96	.11654	3.96	.15591	4.96	.19528	5.96	.23465	6.96	.27402	7.96	.31339	8.96	.35276	9.96	.39213
.97	.038189	1.97	.07756	2.97	.11693	3.97	.15630	4.97	.19567	5.97	.23504	6.97	.27441	7.97	.31378	8.97	.35315	9.97	.39252
.98	.038583	1.98	.07795	2.98	.11732	3.98	.15669	4.98	.19606	5.98	.23543	6.98	.27480	7.98	.31417	8.98	.35354	9.98	.39291
.99	.038976	1.99	.07835	2.99	.11772	3.99	.15709	4.99	.19646	5.99	.23583	6.99	.27520	7.99	.31457	8.99	.35394	9.99	.39331

8.7. LENGTH—MILLIMETERS TO INCHES—Continued

[Reduction Factor: 1 millimeter = 0.039 370 08 inch]

Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inhces	Millimeters	Inches
10.00	0.39370	11.00	0.43307	12.00	0.47244	13.00	0.51181	14.00	0.55118	15.00	0.59055	16.00	0.62992	17.00	0.66929	18.00	0.70866	19.00	0.74803
10.01	.39409	11.01	.43346	12.01	.47283	13.01	.51220	14.01	.55157	15.01	.59094	16.01	.63031	17.01	.66969	18.01	.70906	19.01	.74843
10.02	.39449	11.02	.43386	12.02	.47323	13.02	.51260	14.02	.55197	15.02	.59134	16.02	.63071	17.02	.67008	18.02	.70945	19.02	.74882
10.03	.39488	11.03	.43425	12.03	.47362	13.03	.51299	14.03	.55236	15.03	.59173	16.03	.63110	17.03	.67047	18.03	.70984	19.03	.74921
10.04	.39528	11.04	.43465	12.04	.47402	13.04	.51339	14.04	.55276	15.04	.59213	16.04	.63150	17.04	.67087	18.04	.71024	19.04	.74961
10.05	.39567	11.05	.43504	12.05	.47441	13.05	.51378	14.05	.55315	15.05	.59252	16.05	.63189	17.05	.67126	18.05	.71063	19.05	.75000
10.06	.39606	11.06	.43543	12.06	.47480	13.06	.51417	14.06	.55354	15.06	.59291	16.06	.63228	17.06	.67165	18.06	.71102	19.06	.75039
10.07	.39646	11.07	.43583	12.07	.47520	13.07	.51457	14.07	.55394	15.07	.59331	16.07	.63268	17.07	.67205	18.07	.71142	19.07	.75079
10.08	.39685	11.08	.43622	12.08	.47559	13.08	.51496	14.08	.55433	15.08	.59370	16.08	.63307	17.08	.67244	18.08	.71181	19.08	.75118
10.09	.39724	11.09	.43661	12.09	.47598	13.09	.51535	14.09	.55472	15.09	.59409	16.09	.63346	17.09	.67283	18.09	.71220	19.09	.75157
10.10	0.39764	11.10	0.43701	12.10	0.47638	13.10	0.51575	14.10	0.55512	15.10	0.59449	16.10	0.63386	17.10	0.67323	18.10	0.71260	19.10	0.75197
10.11	.39803	11.11	.43740	12.11	.47677	13.11	.51614	14.11	.55551	15.11	.59488	16.11	.63425	17.11	.67362	18.11	.71299	19.11	.75236
10.12	.39843	11.12	.43780	12.12	.47717	13.12	.51654	14.12	.55591	15.12	.59528	16.12	.63465	17.12	.67402	18.12	.71339	19.12	.75276
10.13	.39882	11.13	.43819	12.13	.47756	13.13	.51693	14.13	.55630	15.13	.59567	16.13	.63504	17.13	.67441	18.13	.71378	19.13	.75315
10.14	.39921	11.14	.43858	12.14	.47795	13.14	.51732	14.14	.55669	15.14	.59606	16.14	.63543	17.14	.67480	18.14	.71417	19.14	.75354
10.15	.39961	11.15	.43898	12.15	.47835	13.15	.51772	14.15	.55709	15.15	.59646	16.15	.63583	17.15	.67520	18.15	.71457	19.15	.75394
10.16	.40000	11.16	.43937	12.16	.47874	13.16	.51811	14.16	.55748	15.16	.59685	16.16	.63622	17.16	.67559	18.16	.71496	19.16	.75433
10.17	.40039	11.17	.43976	12.17	.47913	13.17	.51850	14.17	.55787	15.17	.59724	16.17	.63661	17.17	.67598	18.17	.71535	19.17	.75472
10.18	.40079	11.18	.44016	12.18	.47953	13.18	.51890	14.18	.55827	15.18	.59764	16.18	.63701	17.18	.67638	18.18	.71575	19.18	.75512
10.19	.40118	11.19	.44055	12.19	.47992	13.19	.51929	14.19	.55866	15.19	.59803	16.19	.63740	17.19	.67677	18.19	.71614	19.19	.75551
10.20	0.40157	11.20	0.44094	12.20	0.48031	13.20	0.51969	14.20	0.55906	15.20	0.59843	16.20	0.63780	17.20	0.67717	18.20	0.71654	19.20	0.75591
10.21	.40197	11.21	.44134	12.21	.48071	13.21	.52008	14.21	.55945	15.21	.59882	16.21	.63819	17.21	.67756	18.21	.71693	19.21	.75630
10.22	.40236	11.22	.44173	12.22	.48110	13.22	.52047	14.22	.55984	15.22	.59921	16.22	.63858	17.22	.67795	18.22	.71732	19.22	.75669
10.23	.40276	11.23	.44213	12.23	.48150	13.23	.52087	14.23	.56024	15.23	.59961	16.23	.63898	17.23	.67835	18.23	.71772	19.23	.75709
10.24	.40315	11.24	.44252	12.24	.48189	13.24	.52126	14.24	.56063	15.24	.60000	16.24	.63937	17.24	.67874	18.24	.71811	19.24	.75748
10.25	.40354	11.25	.44291	12.25	.48228	13.25	.52165	14.25	.56102	15.25	.60039	16.25	.63976	17.25	.67913	18.25	.71850	19.25	.75787
10.26	.40394	11.26	.44331	12.26	.48268	13.26	.52205	14.26	.56142	15.26	.60079	16.26	.64016	17.26	.67953	18.26	.71890	19.26	.75827
10.27	.40433	11.27	.44370	12.27	.48307	13.27	.52244	14.27	.56181	15.27	.60118	16.27	.64055	17.27	.67992	18.27	.71929	19.27	.75866
10.28	.40472	11.28	.44409	12.28	.48346	13.28	.52283	14.28	.56220	15.28	.60157	16.28	.64094	17.28	.68031	18.28	.71969	19.28	.75906
10.29	.40512	11.29	.44449	12.29	.48386	13.29	.52323	14.29	.56260	15.29	.60197	16.29	.64134	17.29	.68071	18.29	.72008	19.29	.75945
10.30	0.40551	11.30	0.44488	12.30	0.48425	13.30	0.52362	14.30	0.56299	15.30	0.60236	16.30	0.64173	17.30	0.68110	18.30	0.72047	19.30	0.75984
10.31	.40591	11.31	.44528	12.31	.48465	13.31	.52402	14.31	.56339	15.31	.60276	16.31	.64213	17.31	.68150	18.31	.72087	19.31	.76024
10.32	.40630	11.32	.44567	12.32	.48504	13.32	.52441	14.32	.56378	15.32	.60315	16.32	.64252	17.32	.68189	18.32	.72126	19.32	.76063
10.33	.40669	11.33	.44606	12.33	.48543	13.33	.52480	14.33	.56417	15.33	.60354	16.33	.64291	17.33	.68228	18.33	.72165	19.33	.76102
10.34	.40709	11.34	.44646	12.34	.48583	13.34	.52520	14.34	.56457	15.34	.60394	16.34	.64331	17.34	.68268	18.34	.72205	19.34	.76142
10.35	.40748	11.35	.44685	12.35	.48622	13.35	.52559	14.35	.56496	15.35	.60433	16.35	.64370	17.35	.68307	18.35	.72244	19.35	.76181
10.36	.40787	11.36	.44724	12.36	.48661	13.36	.52598	14.36	.56535	15.36	.60472	16.36	.64409	17.36	.68346	18.36	.72283	19.36	.76220
10.37	.40827	11.37	.44764	12.37	.48701	13.37	.52638	14.37	.56575	15.37	.60512	16.37	.64449	17.37	.68386	18.37	.72323	19.37	.76260
10.38	.40866	11.38	.44803	12.38	.48740	13.38	.52677	14.38	.56614	15.38	.60551	16.38	.64488	17.38	.68425	18.38	.72362	19.38	.76299
10.39	.40906	11.39	.44843	12.39	.48780	13.39	.52717	14.39	.56654	15.39	.60591	16.39	.64528	17.39	.68465	18.39	.72402	19.39	.76339
10.40	0.40945	11.40	0.44882	12.40	0.48819	13.40	0.52756	14.40	0.56693	15.40	0.60630	16.40	0.64567	17.40	0.68504	18.40	0.72441	19.40	0.76378
10.41	.40984	11.41	.44921	12.41	.48858	13.41	.52795	14.41	.56732	15.41	.60669	16.41	.64606	17.41	.68543	18.41	.72480	19.41	.76417
10.42	.41024	11.42	.44961	12.42	.48898	13.42	.52835	14.42	.56772	15.42	.60709	16.42	.64646	17.42	.68583	18.42	.72520	19.42	.76457
10.43	.41063	11.43	.45000	12.43	.48937	13.43	.52874	14.43	.56811	15.43	.60748	16.43	.64685	17.43	.68622	18.43	.72559	19.43	.76496
10.44	.41102	11.44	.45039	12.44	.48976	13.44	.52913	14.44	.56850	15.44	.60787	16.44	.64724	17.44	.68661	18.44	.72598	19.44	.76535
10.45	.41142	11.45	.45079	12.45	.49016	13.45	.52953	14.45	.56890	15.45	.60827	16.45	.64764	17.45	.68701	18.45	.72638	19.45	.76575
10.46	.41181	11.46	.45118	12.46	.49055	13.46	.52992	14.46	.56929	15.46	.60866	16.46	.64803	17.46	.68740	18.46	.72677	19.46	.76614
10.47	.41220	11.47	.45157	12.47	.49094	13.47	.53031	14.47	.56969	15.47	.60906	16.47	.64843	17.47	.68780	18.47	.72717	19.47	.76654
10.48	.41260	11.48	.45197	12.48	.49134	13.48	.53071	14.48	.57008	15.48	.60945	16.48	.64882	17.48	.68819	18.48	.72756	19.48	.76693
10.49	.41299	11.49	.45236	12.49	.49173	13.49	.53110	14.49	.57047	15.49	.60984	16.49	.64921	17.49	.68858	18.49	.72795	19.49	.76732

10.50	0.41339	11.50	0.45276	12.50	0.49213	13.50	0.53150	14.50	0.57087	15.50	0.61024	16.50	0.64961	17.50	0.68898	18.50	0.72835	19.50	0.76772
10.51	.41378	11.51	.45315	12.51	.49252	13.51	.53189	14.51	.57126	15.51	.61063	16.51	.65000	17.51	.68937	18.51	.72874	19.51	.76811
10.52	.41417	11.52	.45354	12.52	.49291	13.52	.53228	14.52	.57165	15.52	.61102	16.52	.65039	17.52	.68976	18.52	.72913	19.52	.76850
10.53	.41457	11.53	.45394	12.53	.49331	13.53	.53268	14.53	.57205	15.53	.61142	16.53	.65079	17.53	.69016	18.53	.72953	19.53	.76890
10.54	.41496	11.54	.45433	12.54	.49370	13.54	.53307	14.54	.57244	15.54	.61181	16.54	.65118	17.54	.69055	18.54	.72992	19.54	.76929
10.55	.41535	11.55	.45472	12.55	.49409	13.55	.53346	14.55	.57283	15.55	.61220	16.55	.65157	17.55	.69094	18.55	.73031	19.55	.76969
10.56	.41575	11.56	.45512	12.56	.49449	13.56	.53386	14.56	.57323	15.56	.61260	16.56	.65197	17.56	.69134	18.56	.73071	19.56	.77008
10.57	.41614	11.57	.45551	12.57	.49488	13.57	.53425	14.57	.57362	15.57	.61299	16.57	.65236	17.57	.69173	18.57	.73110	19.57	.77047
10.58	.41654	11.58	.45591	12.58	.49528	13.58	.53465	14.58	.57402	15.58	.61339	16.58	.65276	17.58	.69213	18.58	.73150	19.58	.77087
10.59	.41693	11.59	.45630	12.59	.49567	13.59	.53504	14.59	.57441	15.59	.61378	16.59	.65315	17.59	.69252	18.59	.73189	19.59	.77126
10.60	0.41732	11.60	0.45669	12.60	0.49606	13.60	0.53543	14.60	0.57480	15.60	0.61417	16.60	0.65354	17.60	0.69291	18.60	0.73228	19.60	0.77165
10.61	.41772	11.61	.45709	12.61	.49646	13.61	.53583	14.61	.57520	15.61	.61457	16.61	.65394	17.61	.69331	18.61	.73268	19.61	.77205
10.62	.41811	11.62	.45748	12.62	.49685	13.62	.53622	14.62	.57559	15.62	.61496	16.62	.65433	17.62	.69370	18.62	.73307	19.62	.77244
10.63	.41850	11.63	.45787	12.63	.49724	13.63	.53661	14.63	.57598	15.63	.61535	16.63	.65472	17.63	.69409	18.63	.73346	19.63	.77283
10.64	.41890	11.64	.45827	12.64	.49764	13.64	.53701	14.64	.57638	15.64	.61575	16.64	.65512	17.64	.69449	18.64	.73386	19.64	.77323
10.65	.41929	11.65	.45866	12.65	.49803	13.65	.53740	14.65	.57677	15.65	.61614	16.65	.65551	17.65	.69488	18.65	.73425	19.65	.77362
10.66	.41969	11.66	.45906	12.66	.49843	13.66	.53780	14.66	.57717	15.66	.61654	16.66	.65591	17.66	.69528	18.66	.73465	19.66	.77402
10.67	.42008	11.67	.45945	12.67	.49882	13.67	.53819	14.67	.57756	15.67	.61693	16.67	.65630	17.67	.69567	18.67	.73504	19.67	.77441
10.68	.42047	11.68	.45984	12.68	.49921	13.68	.53858	14.68	.57795	15.68	.61732	16.68	.65669	17.68	.69606	18.68	.73543	19.68	.77480
10.69	.42087	11.69	.46024	12.69	.49961	13.69	.53898	14.69	.57835	15.69	.61772	16.69	.65709	17.69	.69646	18.69	.73583	19.69	.77520
10.70	0.42126	11.70	0.46063	12.70	0.50000	13.70	0.53937	14.70	0.57874	15.70	0.61811	16.70	0.65748	17.70	0.69685	18.70	0.73622	19.70	0.77559
10.71	.42165	11.71	.46102	12.71	.50039	13.71	.53976	14.71	.57913	15.71	.61850	16.71	.65787	17.71	.69724	18.71	.73661	19.71	.77598
10.72	.42205	11.72	.46142	12.72	.50079	13.72	.54016	14.72	.57953	15.72	.61890	16.72	.65827	17.72	.69764	18.72	.73701	19.72	.77638
10.73	.42244	11.73	.46181	12.73	.50118	13.73	.54055	14.73	.57992	15.73	.61929	16.73	.65866	17.73	.69803	18.73	.73740	19.73	.77677
10.74	.42283	11.74	.46220	12.74	.50157	13.74	.54094	14.74	.58031	15.74	.61969	16.74	.65906	17.74	.69843	18.74	.73780	19.74	.77717
10.75	.42323	11.75	.46260	12.75	.50197	13.75	.54134	14.75	.58071	15.75	.62008	16.75	.65945	17.75	.69882	18.75	.73819	19.75	.77756
10.76	.42362	11.76	.46299	12.76	.50236	13.76	.54173	14.76	.58110	15.76	.62047	16.76	.65984	17.76	.69921	18.76	.73858	19.76	.77795
10.77	.42402	11.77	.46339	12.77	.50276	13.77	.54213	14.77	.58150	15.77	.62087	16.77	.66024	17.77	.69961	18.77	.73898	19.77	.77835
10.78	.42441	11.78	.46378	12.78	.50315	13.78	.54252	14.78	.58189	15.78	.62126	16.78	.66063	17.78	.70000	18.78	.73937	19.78	.77874
10.79	.42480	11.79	.46417	12.79	.50354	13.79	.54291	14.79	.58228	15.79	.62165	16.79	.66102	17.79	.70039	18.79	.73976	19.79	.77913
10.80	0.42520	11.80	0.46457	12.80	0.50394	13.80	0.54331	14.80	0.58268	15.80	0.62205	16.80	0.66142	17.80	0.70079	18.80	0.74016	19.80	0.77953
10.81	.42559	11.81	.46496	12.81	.50433	13.81	.54370	14.81	.58307	15.81	.62244	16.81	.66181	17.81	.70118	18.81	.74055	19.81	.77992
10.82	.42598	11.82	.46535	12.82	.50472	13.82	.54409	14.82	.58346	15.82	.62283	16.82	.66220	17.82	.70157	18.82	.74094	19.82	.78031
10.83	.42638	11.83	.46575	12.83	.50512	13.83	.54449	14.83	.58386	15.83	.62323	16.83	.66260	17.83	.70197	18.83	.74134	19.83	.78071
10.84	.42677	11.84	.46614	12.84	.50551	13.84	.54488	14.84	.58425	15.84	.62362	16.84	.66299	17.84	.70236	18.84	.74173	19.84	.78110
10.85	.42717	11.85	.46654	12.85	.50591	13.85	.54528	14.85	.58465	15.85	.62402	16.85	.66339	17.85	.70276	18.85	.74213	19.85	.78150
10.86	.42756	11.86	.46693	12.86	.50630	13.86	.54567	14.86	.58504	15.86	.62441	16.86	.66378	17.86	.70315	18.86	.74252	19.86	.78189
10.87	.42795	11.87	.46732	12.87	.50669	13.87	.54606	14.87	.58543	15.87	.62480	16.87	.66417	17.87	.70354	18.87	.74291	19.87	.78228
10.88	.42835	11.88	.46772	12.88	.50709	13.88	.54646	14.88	.58583	15.88	.62520	16.88	.66457	17.88	.70394	18.88	.74331	19.88	.78268
10.89	.42874	11.89	.46811	12.89	.50748	13.89	.54685	14.89	.58622	15.89	.62559	16.89	.66496	17.89	.70433	18.89	.74370	19.89	.78307
10.90	0.42913	11.90	0.46850	12.90	0.50787	13.90	0.54724	14.90	0.58661	15.90	0.62598	16.90	0.66535	17.90	0.70472	18.90	0.74409	19.90	0.78346
10.91	.42953	11.91	.46890	12.91	.50827	13.91	.54764	14.91	.58701	15.91	.62638	16.91	.66575	17.91	.70512	18.91	.74449	19.91	.78386
10.92	.42992	11.92	.46929	12.92	.50866	13.92	.54803	14.92	.58740	15.92	.62677	16.92	.66614	17.92	.70551	18.92	.74488	19.92	.78425
10.93	.43031	11.93	.46969	12.93	.50906	13.93	.54843	14.93	.58780	15.93	.62717	16.93	.66654	17.93	.70591	18.93	.74528	19.93	.78465
10.94	.43071	11.94	.47008	12.94	.50945	13.94	.54882	14.94	.58819	15.94	.62756	16.94	.66693	17.94	.70630	18.94	.74567	19.94	.78504
10.95	.43110	11.95	.47047	12.95	.50984	13.95	.54921	14.95	.58858	15.95	.62795	16.95	.66732	17.95	.70669	18.95	.74606	19.95	.78543
10.96	.43150	11.96	.47087	12.96	.51024	13.96	.54961	14.96	.58898	15.96	.62835	16.96	.66772	17.96	.70709	18.96	.74646	19.96	.78583
10.97	.43189	11.97	.47126	12.97	.51063	13.97	.55000	14.97	.58937	15.97	.62874	16.97	.66811	17.97	.70748	18.97	.74685	19.97	.78622
10.98	.43228	11.98	.47165	12.98	.51102	13.98	.55039	14.98	.58976	15.98	.62913	16.98	.66850	17.98	.70787	18.98	.74724	19.98	.78661
10.99	.43268	11.99	.47205	12.99	.51142	13.99	.55079	14.99	.59016	15.99	.62953	16.99	.66890	17.99	.70827	18.99	.74764	19.99	.78701

8.7. LENGTH—MILLIMETERS TO INCHES—Continued

[Reduction Factor: 1 millimeter = 0.039 370 08

Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches	Millimeters	Inches
20.00	0.78740	21.00	0.82677	22.00	0.86614	23.00	0.90551	24.00	0.94488	25.00	0.98425
20.01	.78780	21.01	.82717	22.01	.86654	23.01	.90591	24.01	.94528	25.01	.98465
20.02	.78819	21.02	.82756	22.02	.86693	23.02	.90630	24.02	.94567	25.02	.98504
20.03	.78858	21.03	.82795	22.03	.86732	23.03	.90669	24.03	.94606	25.03	.98543
20.04	.78898	21.04	.82835	22.04	.86772	23.04	.90709	24.04	.94646	25.04	.98583
20.05	.78937	21.05	.82874	22.05	.86811	23.05	.90748	24.05	.94685	25.05	.98622
20.06	.78976	21.06	.82913	22.06	.86850	23.06	.90787	24.06	.94724	25.06	.98661
20.07	.79016	21.07	.82953	22.07	.86890	23.07	.90827	24.07	.94764	25.07	.98701
20.08	.79055	21.08	.82992	22.08	.86929	23.08	.90866	24.08	.94803	25.08	.98740
20.09	.79094	21.09	.83031	22.09	.86969	23.09	.90906	24.09	.94843	25.09	.98780
20.10	0.79134	21.10	0.83071	22.10	0.87008	23.10	0.90945	24.10	0.94882	25.10	0.98819
20.11	.79173	21.11	.83110	22.11	.87047	23.11	.90984	24.11	.94921	25.11	.98858
20.12	.79213	21.12	.83150	22.12	.87087	23.12	.91024	24.12	.94961	25.12	.98898
20.13	.79252	21.13	.83189	22.13	.87126	23.13	.91063	24.13	.95000	25.13	.98937
20.14	.79291	21.14	.83228	22.14	.87165	23.14	.91102	24.14	.95039	25.14	.98976
20.15	.79331	21.15	.83268	22.15	.87205	23.15	.91142	24.15	.95079	25.15	.99016
20.16	.79370	21.16	.83307	22.16	.87244	23.16	.91181	24.16	.95118	25.16	.99055
20.17	.79409	21.17	.83346	22.17	.87283	23.17	.91220	24.17	.95157	25.17	.99094
20.18	.79449	21.18	.83386	22.18	.87323	23.18	.91260	24.18	.95197	25.18	.99134
20.19	.79488	21.19	.83425	22.19	.87362	23.19	.91299	24.19	.95236	25.19	.99173
20.20	0.79528	21.20	0.83465	22.20	0.87402	23.20	0.91339	24.20	0.95276	25.20	0.99213
20.21	.79567	21.21	.83504	22.21	.87441	23.21	.91378	24.21	.95315	25.21	.99252
20.22	.79606	21.22	.83543	22.22	.87480	23.22	.91417	24.22	.95354	25.22	.99291
20.23	.79646	21.23	.83583	22.23	.87520	23.23	.91457	24.23	.95394	25.23	.99331
20.24	.79685	21.24	.83622	22.24	.87559	23.24	.91496	24.24	.95433	25.24	.99370
20.25	.79724	21.25	.83661	22.25	.87598	23.25	.91535	24.25	.95472	25.25	.99409
20.26	.79764	21.26	.83701	22.26	.87638	23.26	.91575	24.26	.95512	25.26	.99449
20.27	.79803	21.27	.83740	22.27	.87677	23.27	.91614	24.27	.95551	25.27	.99488
20.28	.79843	21.28	.83780	22.28	.87717	23.28	.91654	24.28	.95591	25.28	.99528
20.29	.79882	21.29	.83819	22.29	.87756	23.29	.91693	24.29	.95630	25.29	.99567
20.30	0.79921	21.30	0.83858	22.30	0.87795	23.30	0.91732	24.30	0.95669	25.30	0.99606
20.31	.79961	21.31	.83898	22.31	.87835	23.31	.91772	24.31	.95709	25.31	.99646
20.32	.80000	21.32	.83937	22.32	.87874	23.32	.91811	24.32	.95748	25.32	.99685
20.33	.80039	21.33	.83976	22.33	.87913	23.33	.91850	24.33	.95787	25.33	.99724
20.34	.80079	21.34	.84016	22.34	.87953	23.34	.91890	24.34	.95827	25.34	.99764
20.35	.80118	21.35	.84055	22.35	.87992	23.35	.91929	24.35	.95866	25.35	.99803
20.36	.80157	21.36	.84094	22.36	.88031	23.36	.91969	24.36	.95906	25.36	.99843
20.37	.80197	21.37	.84134	22.37	.88071	23.37	.92008	24.37	.95945	25.37	.99882
20.38	.80236	21.38	.84173	22.38	.88110	23.38	.92047	24.38	.95984	25.38	.99921
20.39	.80276	21.39	.84213	22.39	.88150	23.39	.92087	24.39	.96024	25.39	.99961
20.40	0.80315	21.40	0.84252	22.40	0.88189	23.40	0.92126	24.40	0.96063	25.40	1.00000
20.41	.80354	21.41	.84291	22.41	.88228	23.41	.92165	24.41	.96102		
20.42	.80394	21.42	.84331	22.42	.88268	23.42	.92205	24.42	.96142		
20.43	.80433	21.43	.84370	22.43	.88307	23.43	.92244	24.43	.96181		
20.44	.80472	21.44	.84409	22.44	.88346	23.44	.92283	24.44	.96220		
20.45	.80512	21.45	.84449	22.45	.88386	23.45	.92323	24.45	.96260		
20.46	.80551	21.46	.84488	22.46	.88425	23.46	.92362	24.46	.96299		
20.47	.80591	21.47	.84528	22.47	.88465	23.47	.92402	24.47	.96339		
20.48	.80630	21.48	.84567	22.48	.88504	23.48	.92441	24.48	.96378		
20.49	.80669	21.49	.84606	22.49	.88543	23.49	.92480	24.49	.96417		

20.50	0.80709	21.50	0.84646	22.50	0.88583	23.50	0.92520	24.50	0.96457
20.51	.80748	21.51	.84685	22.51	.88622	23.51	.92559	24.51	.96496
20.52	.80787	21.52	.84724	22.52	.88661	23.52	.92598	24.52	.96535
20.53	.80827	21.53	.84764	22.53	.88701	23.53	.92638	24.53	.96575
20.54	.80866	21.54	.84803	22.54	.88740	23.54	.92677	24.54	.96614
20.55	.80906	21.55	.84843	22.55	.88780	23.55	.92717	24.55	.96654
20.56	.80945	21.56	.84882	22.56	.88819	23.56	.92756	24.56	.96693
20.57	.80984	21.57	.84921	22.57	.88858	23.57	.92795	24.57	.96732
20.58	.81024	21.58	.84961	22.58	.88898	23.58	.92835	24.58	.96772
20.59	.81063	21.59	.85000	22.59	.88937	23.59	.92874	24.59	.96811
20.60	0.81102	21.60	0.85039	22.60	0.88976	23.60	0.92913	24.60	0.96850
20.61	.81142	21.61	.85079	22.61	.89016	23.61	.92953	24.61	.96890
20.62	.81181	21.62	.85118	22.62	.89055	23.62	.92992	24.62	.96929
20.63	.81220	21.63	.85157	22.63	.89094	23.63	.93031	24.63	.96969
20.64	.81260	21.64	.85197	22.64	.89134	23.64	.93071	24.64	.97008
20.65	.81299	21.65	.85236	22.65	.89173	23.65	.93110	24.65	.97047
20.66	.81339	21.66	.85276	22.66	.89213	23.66	.93150	24.66	.97087
20.67	.81378	21.67	.85315	22.67	.89252	23.67	.93189	24.67	.97126
20.68	.81417	21.68	.85354	22.68	.89291	23.68	.93228	24.68	.97165
20.69	.81457	21.69	.85394	22.69	.89331	23.69	.93268	24.69	.97205
20.70	0.81496	21.70	0.85433	22.70	0.89370	23.70	0.93307	24.70	0.97244
20.71	.81535	21.71	.85472	22.71	.89409	23.71	.93346	24.71	.97283
20.72	.81575	21.72	.85512	22.72	.89449	23.72	.93386	24.72	.97323
20.73	.81614	21.73	.85551	22.73	.89488	23.73	.93425	24.73	.97362
20.74	.81654	21.74	.85591	22.74	.89528	23.74	.93465	24.74	.97402
20.75	.81693	21.75	.85630	22.75	.89567	23.75	.93504	24.75	.97441
20.76	.81732	21.76	.85669	22.76	.89606	23.76	.93543	24.76	.97480
20.77	.81772	21.77	.85709	22.77	.89646	23.77	.93583	24.77	.97520
20.78	.81811	21.78	.85748	22.78	.89685	23.78	.93622	24.78	.97559
20.79	.81850	21.79	.85787	22.79	.89724	23.79	.93661	24.79	.97598
20.80	0.81890	21.80	0.85827	22.80	0.89764	23.80	0.93701	24.80	0.97638
20.81	.81929	21.81	.85866	22.81	.89803	23.81	.93740	24.81	.97677
20.82	.81969	21.82	.85906	22.82	.89843	23.82	.93780	24.82	.97717
20.83	.82008	21.83	.85945	22.83	.89882	23.83	.93819	24.83	.97756
20.84	.82047	21.84	.85984	22.84	.89921	23.84	.93858	24.84	.97795
20.85	.82087	21.85	.86024	22.85	.89961	23.85	.93898	24.85	.97835
20.86	.82126	21.86	.86063	22.86	.90000	23.86	.93937	24.86	.97874
20.87	.82165	21.87	.86102	22.87	.90039	23.87	.93976	24.87	.97913
20.88	.82205	21.88	.86142	22.88	.90079	23.88	.94016	24.88	.97953
20.89	.82244	21.89	.86181	22.89	.90118	23.89	.94055	24.89	.97992
20.90	0.82283	21.90	0.86220	22.90	0.90157	23.90	0.94094	24.90	0.98031
20.91	.82323	21.91	.86260	22.91	.90197	23.91	.94134	24.91	.98071
20.92	.82362	21.92	.86299	22.92	.90236	23.92	.94173	24.92	.98110
20.93	.82402	21.93	.86339	22.93	.90276	23.93	.94213	24.93	.98150
20.94	.82441	21.94	.86378	22.94	.90315	23.94	.94252	24.94	.98189
20.95	.82480	21.95	.86417	22.95	.90354	23.95	.94291	24.95	.98228
20.96	.82520	21.96	.86457	22.96	.90394	23.96	.94331	24.96	.98268
20.97	.82559	21.97	.86496	22.97	.90433	23.97	.94370	24.97	.98307
20.98	.82598	21.98	.86535	22.98	.90472	23.98	.94409	24.98	.98346
20.99	.82638	21.99	.86575	22.99	.90512	23.99	.94449	24.99	.98386

9. TABLES OF EQUIVALENTS FROM 1 TO 999 UNITS

9.1. LENGTH—FEET TO METERS

[Reduction Factor: 1 foot = 0.3048 meter]

Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters
0		100	30.4800	200	60.9600	300	91.4400	400	121.9200	500	152.4000	600	182.8800	700	213.3600	800	243.8400	900	274.3200
1	0.3048	101	30.7848	201	61.2648	301	91.7448	401	122.2248	501	152.7048	601	183.1848	701	213.6648	801	244.1448	901	274.6248
2	.6096	102	31.0896	202	61.5696	302	92.0496	402	122.5296	502	153.0096	602	183.4896	702	213.9696	802	244.4496	902	274.9296
3	.9144	103	31.3944	203	61.8744	303	92.3544	403	122.8344	503	153.3144	603	183.7944	703	214.2744	803	244.7544	903	275.2344
4	1.2192	104	31.6992	204	62.1792	304	92.6592	404	123.1392	504	153.6192	604	184.0992	704	214.5792	804	245.0592	904	275.5392
5	1.5240	105	32.0040	205	62.4840	305	92.9640	405	123.4440	505	153.9240	605	184.4040	705	214.8840	805	245.3640	905	275.8440
6	1.8288	106	32.3088	206	62.7888	306	93.2688	406	123.7488	506	154.2288	606	184.7088	706	215.1888	806	245.6688	906	276.1488
7	2.1336	107	32.6136	207	63.0936	307	93.5736	407	124.0536	507	154.5336	607	185.0136	707	215.4936	807	245.9736	907	276.4536
8	2.4384	108	32.9184	208	63.3984	308	93.8784	408	124.3584	508	154.8384	608	185.3184	708	215.7984	808	246.2784	908	276.7584
9	2.7432	109	33.2232	209	63.7032	309	94.1832	409	124.6632	509	155.1432	609	185.6232	709	216.1032	809	246.5832	909	277.0632
10	3.0480	110	33.5280	210	64.0080	310	94.4880	410	124.9680	510	155.4480	610	185.9280	710	216.4080	810	246.8880	910	277.3680
11	3.3528	111	33.8328	211	64.3128	311	94.7928	411	125.2728	511	155.7528	611	186.2328	711	216.7128	811	247.1928	911	277.6728
12	3.6576	112	34.1376	212	64.6176	312	95.0976	412	125.5776	512	156.0576	612	186.5376	712	217.0176	812	247.4976	912	277.9776
13	3.9624	113	34.4424	213	64.9224	313	95.4024	413	125.8824	513	156.3624	613	186.8424	713	217.3224	813	247.8024	913	278.2824
14	4.2672	114	34.7472	214	65.2272	314	95.7072	414	126.1872	514	156.6672	614	187.1472	714	217.6272	814	248.1072	914	278.5872
15	4.5720	115	35.0520	215	65.5320	315	96.0120	415	126.4920	515	156.9720	615	187.4520	715	217.9320	815	248.4120	915	278.8920
16	4.8768	116	35.3568	216	65.8368	316	96.3168	416	126.7968	516	157.2768	616	187.7568	716	218.2368	816	248.7168	916	279.1968
17	5.1816	117	35.6616	217	66.1416	317	96.6216	417	127.1016	517	157.5816	617	188.0616	717	218.5416	817	249.0216	917	279.5016
18	5.4864	118	35.9664	218	66.4464	318	96.9264	418	127.4064	518	157.8864	618	188.3664	718	218.8464	818	249.3264	918	279.8064
19	5.7912	119	36.2712	219	66.7512	319	97.2312	419	127.7112	519	158.1912	619	188.6712	719	219.1512	819	249.6312	919	280.1112
20	6.0960	120	36.5760	220	67.0560	320	97.5360	420	128.0160	520	158.4960	620	188.9760	720	219.4560	820	249.9360	920	280.4160
21	6.4008	121	36.8808	221	67.3608	321	97.8408	421	128.3208	521	158.8008	621	189.2808	721	219.7608	821	250.2408	921	280.7208
22	6.7056	122	37.1856	222	67.6656	322	98.1456	422	128.6256	522	159.1056	622	189.5856	722	220.0656	822	250.5456	922	281.0256
23	7.0104	123	37.4904	223	67.9704	323	98.4504	423	128.9304	523	159.4104	623	189.8904	723	220.3704	823	250.8504	923	281.3304
24	7.3152	124	37.7952	224	68.2752	324	98.7552	424	129.2352	524	159.7152	624	190.1952	724	220.6752	824	251.1552	924	281.6352
25	7.6200	125	38.1000	225	68.5800	325	99.0600	425	129.5400	525	160.0200	625	190.5000	725	220.9800	825	251.4600	925	281.9400
26	7.9248	126	38.4048	226	68.8848	326	99.3648	426	129.8448	526	160.3248	626	190.8048	726	221.2848	826	251.7648	926	282.2448
27	8.2296	127	38.7096	227	69.1896	327	99.6696	427	130.1496	527	160.6296	627	191.1096	727	221.5896	827	252.0696	927	282.5496
28	8.5344	128	39.0144	228	69.4944	328	99.9744	428	130.4544	528	160.9344	628	191.4144	728	221.8944	828	252.3744	928	282.8544
29	8.8392	129	39.3192	229	69.7992	329	100.2792	429	130.7592	529	161.2392	629	191.7192	729	222.1992	829	252.6792	929	283.1592
30	9.1440	130	39.6240	230	70.1040	330	100.5840	430	131.0640	530	161.5440	630	192.0240	730	222.5040	830	252.9840	930	283.4640
31	9.4488	131	39.9288	231	70.4088	331	100.8888	431	131.3688	531	161.8488	631	192.3288	731	222.8088	831	253.2888	931	283.7688
32	9.7536	132	40.2336	232	70.7136	332	101.1936	432	131.6736	532	162.1536	632	192.6336	732	223.1136	832	253.5936	932	284.0736
33	10.0584	133	40.5384	233	71.0184	333	101.4984	433	131.9784	533	162.4584	633	192.9384	733	223.4184	833	253.8984	933	284.3784
34	10.3632	134	40.8432	234	71.3232	334	101.8032	434	132.2832	534	162.7632	634	193.2432	734	223.7232	834	254.2032	934	284.6832
35	10.6680	135	41.1480	235	71.6280	335	102.1080	435	132.5880	535	163.0680	635	193.5480	735	224.0280	835	254.5080	935	284.9880
36	10.9728	136	41.4528	236	71.9328	336	102.4128	436	132.8928	536	163.3728	636	193.8528	736	224.3328	836	254.8128	936	285.2928
37	11.2776	137	41.7576	237	72.2376	337	102.7176	437	133.1976	537	163.6776	637	194.1576	737	224.6376	837	255.1176	937	285.5976
38	11.5824	138	42.0624	238	72.5424	338	103.0224	438	133.5024	538	163.9824	638	194.4624	738	224.9424	838	255.4224	938	285.9024
39	11.8872	139	42.3672	239	72.8472	339	103.3272	439	133.8072	539	164.2872	639	194.7672	739	225.2472	839	255.7272	939	286.2072
40	12.1920	140	42.6720	240	73.1520	340	103.6320	440	134.1120	540	164.5920	640	195.0720	740	225.5520	840	256.0320	940	286.5120
41	12.4968	141	42.9768	241	73.4568	341	103.9368	441	134.4168	541	164.8968	641	195.3768	741	225.8568	841	256.3368	941	286.8168
42	12.8016	142	43.2816	242	73.7616	342	104.2416	442	134.7216	542	165.2016	642	195.6816	742	226.1616	842	256.6416	942	287.1216
43	13.1064	143	43.5864	243	74.0664	343	104.5464	443	135.0264	543	165.5064	643	195.9864	743	226.4664	843	256.9464	943	287.4264
44	13.4112	144	43.8912	244	74.3712	344	104.8512	444	135.3312	544	165.8112	644	196.2912	744	226.7712	844	257.2512	944	287.7312
45	13.7160	145	44.1960	245	74.6760	345	105.1560	445	135.6360	545	166.1160	645	196.5960	745	227.0760	845	257.5560	945	288.0360
46	14.0208	146	44.5008	246	74.9808	346	105.4608	446	135.9408	546	166.4208	646	196.9008	746	227.3808	846	257.8608	946	288.3408
47	14.3256	147	44.8056	247	75.2856	347	105.7656	447	136.2456	547	166.7256	647	197.2056	747	227.6856	847	258.1656	947	288.6456
48	14.6304	148	45.1104	248	75.5904	348	106.0704	448	136.5504	548	167.0304	648	197.5104	748	227.9904	848	258.4704	948	288.9504
49	14.9352	149	45.4152	249	75.8952	349	106.3752	449	136.8552	549	167.3352	649	197.8152	749	228.2952	849	258.7752	949	289.2552

50	15.2400	150	45.7200	250	76.2000	350	106.6800	450	137.1600	550	167.6400	650	198.1200	750	228.6000	850	259.0800	950	289.5600
51	15.5448	151	46.0248	251	76.5048	351	106.9848	451	137.4648	551	167.9448	651	198.4248	751	228.9048	851	259.3848	951	289.8648
52	15.8496	152	46.3296	252	76.8096	352	107.2896	452	137.7696	552	168.2496	652	198.7296	752	229.2096	852	259.6896	952	290.1696
53	16.1544	153	46.6344	253	77.1144	353	107.5944	453	138.0744	553	168.5544	653	199.0344	753	229.5144	853	259.9944	953	290.4744
54	16.4592	154	46.9392	254	77.4192	354	107.8992	454	138.3792	554	168.8592	654	199.3392	754	229.8192	854	260.2992	954	290.7792
55	16.7640	155	47.2440	255	77.7240	355	108.2040	455	138.6840	555	169.1640	655	199.6440	755	230.1240	855	260.6040	955	291.0840
56	17.0688	156	47.5488	256	78.0288	356	108.5088	456	138.9888	556	169.4688	656	199.9488	756	230.4288	856	260.9088	956	291.3888
57	17.3736	157	47.8536	257	78.3336	357	108.8136	457	139.2936	557	169.7736	657	200.2536	757	230.7336	857	261.2136	957	291.6936
58	17.6784	158	48.1584	258	78.6384	358	109.1184	458	139.5984	558	170.0784	658	200.5584	758	231.0384	858	261.5184	958	291.9984
59	17.9832	159	48.4632	259	78.9432	359	109.4232	459	139.9032	559	170.3832	659	200.8632	759	231.3432	859	261.8232	959	292.3032
60	18.2880	160	48.7680	260	79.2480	360	109.7280	460	140.2080	560	170.6880	660	201.1680	760	231.6480	860	262.1280	960	292.6080
61	18.5928	161	49.0728	261	79.5528	361	110.0328	461	140.5128	561	170.9928	661	201.4728	761	231.9528	861	262.4328	961	292.9128
62	18.8976	162	49.3776	262	79.8576	362	110.3376	462	140.8176	562	171.2976	662	201.7776	762	232.2576	862	262.7376	962	293.2176
63	19.2024	163	49.6824	263	80.1624	363	110.6424	463	141.1224	563	171.6024	663	202.0824	763	232.5624	863	263.0424	963	293.5224
64	19.5072	164	49.9872	264	80.4672	364	110.9472	464	141.4272	564	171.9072	664	202.3872	764	232.8672	864	263.3472	964	293.8272
65	19.8120	165	50.2920	265	80.7720	365	111.2520	465	141.7320	565	172.2120	665	202.6920	765	233.1720	865	263.6520	965	294.1320
66	20.1168	166	50.5968	266	81.0768	366	111.5568	466	142.0368	566	172.5168	666	202.9968	766	233.4768	866	263.9568	966	294.4368
67	20.4216	167	50.9016	267	81.3816	367	111.8616	467	142.3416	567	172.8216	667	203.3016	767	233.7816	867	264.2616	967	294.7416
68	20.7264	168	51.2064	268	81.6864	368	112.1664	468	142.6464	568	173.1264	668	203.6064	768	234.0864	868	264.5664	968	295.0464
69	21.0312	169	51.5112	269	81.9912	369	112.4712	469	142.9512	569	173.4312	669	203.9112	769	234.3912	869	264.8712	969	295.3512
70	21.3360	170	51.8160	270	82.2960	370	112.7760	470	143.2560	570	173.7360	670	204.2160	770	234.6960	870	265.1760	970	295.6560
71	21.6408	171	52.1208	271	82.6008	371	113.0808	471	143.5608	571	174.0408	671	204.5208	771	235.0008	871	265.4808	971	295.9608
72	21.9456	172	52.4256	272	82.9056	372	113.3856	472	143.8656	572	174.3456	672	204.8256	772	235.3056	872	265.7856	972	296.2656
73	22.2504	173	52.7304	273	83.2104	373	113.6904	473	144.1704	573	174.6504	673	205.1304	773	235.6104	873	266.0904	973	296.5704
74	22.5552	174	53.0352	274	83.5152	374	113.9952	474	144.4752	574	174.9552	674	205.4352	774	235.9152	874	266.3952	974	296.8752
75	22.8600	175	53.3400	275	83.8200	375	114.3000	475	144.7800	575	175.2600	675	205.7400	775	236.2200	875	266.7000	975	297.1800
76	23.1648	176	53.6448	276	84.1248	376	114.6048	476	145.0848	576	175.5648	676	206.0448	776	236.5248	876	267.0048	976	297.4848
77	23.4696	177	53.9496	277	84.4296	377	114.9096	477	145.3896	577	175.8696	677	206.3496	777	236.8296	877	267.3096	977	297.7896
78	23.7744	178	54.2544	278	84.7344	378	115.2144	478	145.6944	578	176.1744	678	206.6544	778	237.1344	878	267.6144	978	298.0944
79	24.0792	179	54.5592	279	85.0392	379	115.5192	479	145.9992	579	176.4792	679	206.9592	779	237.4392	879	267.9192	979	298.3992
80	24.3840	180	54.8640	280	85.3440	380	115.8240	480	146.3040	580	176.7840	680	207.2640	780	237.7440	880	268.2240	980	298.7040
81	24.6888	181	55.1688	281	85.6488	381	116.1288	481	146.6088	581	177.0888	681	207.5688	781	238.0488	881	268.5288	981	299.0088
82	24.9936	182	55.4736	282	85.9536	382	116.4336	482	146.9136	582	177.3936	682	207.8736	782	238.3536	882	268.8336	982	299.3136
83	25.2984	183	55.7784	283	86.2584	383	116.7384	483	147.2184	583	177.6984	683	208.1784	783	238.6584	883	269.1384	983	299.6184
84	25.6032	184	56.0832	284	86.5632	384	117.0432	484	147.5232	584	178.0032	684	208.4832	784	238.9632	884	269.4432	984	299.9232
85	25.9080	185	56.3880	285	86.8680	385	117.3480	485	147.8280	585	178.3080	685	208.7880	785	239.2680	885	269.7480	985	300.2280
86	26.2128	186	56.6928	286	87.1728	386	117.6528	486	148.1328	586	178.6128	686	209.0928	786	239.5728	886	270.0528	986	300.5328
87	26.5176	187	56.9976	287	87.4776	387	117.9576	487	148.4376	587	178.9176	687	209.3976	787	239.8776	887	270.3576	987	300.8376
88	26.8224	188	57.3024	288	87.7824	388	118.2624	488	148.7424	588	179.2224	688	209.7024	788	240.1824	888	270.6624	988	301.1424
89	27.1272	189	57.6072	289	88.0872	389	118.5672	489	149.0472	589	179.5272	689	210.0072	789	240.4872	889	270.9672	989	301.4472
90	27.4320	190	57.9120	290	88.3920	390	118.8720	490	149.3520	590	179.8320	690	210.3120	790	240.7920	890	271.2720	990	301.7520
91	27.7368	191	58.2168	291	88.6968	391	119.1768	491	149.6568	591	180.1368	691	210.6168	791	241.0968	891	271.5768	991	302.0568
92	28.0416	192	58.5216	292	89.0016	392	119.4816	492	149.9616	592	180.4416	692	210.9216	792	241.4016	892	271.8816	992	302.3616
93	28.3464	193	58.8264	293	89.3064	393	119.7864	493	150.2664	593	180.7464	693	211.2264	793	241.7064	893	272.1864	993	302.6664
94	28.6512	194	59.1312	294	89.6112	394	120.0912	494	150.5712	594	181.0512	694	211.5312	794	242.0112	894	272.4912	994	302.9712
95	28.9560	195	59.4360	295	89.9160	395	120.3960	495	150.8760	595	181.3560	695	211.8360	795	242.3160	895	272.7960	995	303.2760
96	29.2608	196	59.7408	296	90.2208	396	120.7008	496	151.1808	596	181.6608	696	212.1408	796	242.6208	896	273.1008	996	303.5808
97	29.5656	197	60.0456	297	90.5256	397	121.0056	497	151.4856	597	181.9656	697	212.4456	797	242.9256	897	273.4056	997	303.8856
98	29.8704	198	60.3504	298	90.8304	398	121.3104	498	151.7904	598	182.2704	698	212.7504	798	243.2304	898	273.7104	998	304.1904
99	30.1752	199	60.6552	299	91.1352	399	121.6152	499	152.0952	599	182.5752	699	213.0552	799	243.5352	899	274.0152	999	304.4952

9.2. LENGTH—METERS TO FEET

[Reduction Factor: 1 meter = 3.280 839 895 feet]

Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet	Meters	Feet
0		100	328.08399	200	656.16798	300	984.25197	400	1312.33596	500	1640.41995	600	1968.50394	700	2296.58793	800	2624.67192	900	2952.75591
1	3.28084	101	331.36483	201	659.44882	301	987.53281	401	1315.61680	501	1643.70079	601	1971.78478	701	2299.86877	801	2627.95276	901	2956.03675
2	6.56168	102	334.64567	202	662.72966	302	990.81365	402	1318.89764	502	1646.98163	602	1975.06562	702	2303.14961	802	2631.23360	902	2959.31759
3	9.84252	103	337.92651	203	666.01050	303	994.09449	403	1322.17848	503	1650.26247	603	1978.34646	703	2306.43045	803	2634.51444	903	2962.59843
4	13.12336	104	341.20735	204	669.29134	304	997.37533	404	1325.45932	504	1653.54331	604	1981.62730	704	2309.71129	804	2637.79528	904	2965.87927
5	16.40420	105	344.48819	205	672.57218	305	1000.65617	405	1328.74016	505	1656.82415	605	1984.90814	705	2312.99213	805	2641.07612	905	2969.16010
6	19.68504	106	347.76903	206	675.85302	306	1003.93701	406	1332.02100	506	1660.10499	606	1988.18898	706	2316.27297	806	2644.35696	906	2972.44094
7	22.96588	107	351.04987	207	679.13386	307	1007.21785	407	1335.30184	507	1663.38583	607	1991.46982	707	2319.55381	807	2647.63780	907	2975.72178
8	26.24672	108	354.33071	208	682.41470	308	1010.49869	408	1338.58268	508	1666.66667	608	1994.75066	708	2322.83465	808	2650.91864	908	2979.00262
9	29.52756	109	357.61155	209	685.69554	309	1013.77953	409	1341.86352	509	1669.94751	609	1998.03150	709	2326.11549	809	2654.19948	909	2982.28346
10	32.80840	110	360.89239	210	688.97638	310	1017.06037	410	1345.14436	510	1673.22835	610	2001.31234	710	2329.39633	810	2657.48031	910	2985.56430
11	36.08924	111	364.17323	211	692.25722	311	1020.34121	411	1348.42520	511	1676.50919	611	2004.59318	711	2332.67717	811	2660.76115	911	2988.84514
12	39.37008	112	367.45407	212	695.53806	312	1023.62205	412	1351.70604	512	1679.79003	612	2007.87402	712	2335.95801	812	2664.04199	912	2992.12598
13	42.65092	113	370.73491	213	698.81890	313	1026.90289	413	1354.98688	513	1683.07087	613	2011.15486	713	2339.23885	813	2667.32283	913	2995.40682
14	45.93176	114	374.01575	214	702.09974	314	1030.18373	414	1358.26772	514	1686.35171	614	2014.43570	714	2342.51969	814	2670.60367	914	2998.68766
15	49.21260	115	377.29659	215	705.38058	315	1033.46457	415	1361.54856	515	1689.63255	615	2017.71654	715	2345.80052	815	2673.88451	915	3001.96850
16	52.49344	116	380.57743	216	708.66142	316	1036.74541	416	1364.82940	516	1692.91339	616	2020.99738	716	2349.08136	816	2677.16535	916	3005.24934
17	55.77428	117	383.85827	217	711.94226	317	1040.02625	417	1368.11024	517	1696.19423	617	2024.27822	717	2352.36220	817	2680.44619	917	3008.53018
18	59.05512	118	387.13911	218	715.22310	318	1043.30709	418	1371.39108	518	1699.47507	618	2027.55906	718	2355.64304	818	2683.72703	918	3011.81102
19	62.33596	119	390.41995	219	718.50394	319	1046.58793	419	1374.67192	519	1702.75591	619	2030.83990	719	2358.92388	819	2687.00787	919	3015.09186
20	65.61680	120	393.70079	220	721.78478	320	1049.86877	420	1377.95276	520	1706.03675	620	2034.12073	720	2362.20472	820	2690.28871	920	3018.37270
21	68.89764	121	396.98163	221	725.06562	321	1053.14961	421	1381.23360	521	1709.31759	621	2037.40157	721	2365.48556	821	2693.56955	921	3021.65354
22	72.17848	122	400.26247	222	728.34646	322	1056.43045	422	1384.51444	522	1712.59843	622	2040.68241	722	2368.76640	822	2696.85039	922	3024.93438
23	75.45932	123	403.54331	223	731.62730	323	1059.71129	423	1387.79528	523	1715.87927	623	2043.96325	723	2372.04724	823	2700.13123	923	3028.21522
24	78.74016	124	406.82415	224	734.90814	324	1062.99213	424	1391.07612	524	1719.16010	624	2047.24409	724	2375.32808	824	2703.41207	924	3031.49606
25	82.02100	125	410.10499	225	738.18898	325	1066.27297	425	1394.35696	525	1722.44094	625	2050.52493	725	2378.60892	825	2706.69291	925	3034.77690
26	85.30184	126	413.38583	226	741.46982	326	1069.55381	426	1397.63780	526	1725.72178	626	2053.80577	726	2381.88976	826	2709.97375	926	3038.05774
27	88.58268	127	416.66667	227	744.75066	327	1072.83465	427	1400.91864	527	1729.00262	627	2057.08661	727	2385.17060	827	2713.25459	927	3041.33858
28	91.86352	128	419.94751	228	748.03150	328	1076.11549	428	1404.19948	528	1732.28346	628	2060.36745	728	2388.45144	828	2716.53543	928	3044.61942
29	95.14436	129	423.22835	229	751.31234	329	1079.39633	429	1407.48031	529	1735.56430	629	2063.64829	729	2391.73228	829	2719.81627	929	3047.90026
30	98.42520	130	426.50919	230	754.59318	330	1082.67717	430	1410.76115	530	1738.84514	630	2066.92913	730	2395.01312	830	2723.09711	930	3051.18110
31	101.70604	131	429.79003	231	757.87402	331	1085.95801	431	1414.04199	531	1742.12598	631	2070.20997	731	2398.29396	831	2726.37795	931	3054.46194
32	104.98688	132	433.07087	232	761.15486	332	1089.23885	432	1417.32283	532	1745.40682	632	2073.49081	732	2401.57480	832	2729.65879	932	3057.74278
33	108.26772	133	436.35171	233	764.43570	333	1092.51969	433	1420.60367	533	1748.68766	633	2076.77165	733	2404.85564	833	2732.93963	933	3061.02362
34	111.54856	134	439.63255	234	767.71654	334	1095.80052	434	1423.88451	534	1751.96850	634	2080.05249	734	2408.13648	834	2736.22047	934	3064.30446
35	114.82940	135	442.91339	235	770.99738	335	1099.08136	345	1427.16535	535	1755.24934	635	2083.33333	735	2411.41732	835	2739.50131	935	3067.58530
36	118.11024	136	446.19423	236	774.27822	336	1102.36220	436	1430.44619	536	1758.53018	636	2086.61417	736	2414.69816	836	2742.78215	936	3070.86614
37	121.39108	137	449.47507	237	777.55906	337	1105.64304	437	1433.72703	537	1761.81102	637	2089.89501	737	2417.97900	837	2746.06299	937	3074.14698
38	124.67192	138	452.75591	238	780.83990	338	1108.92388	438	1437.00787	538	1765.09186	638	2093.17585	738	2421.25984	838	2749.34383	938	3077.42782
39	127.95276	139	456.03675	239	784.12073	339	1112.20472	439	1440.28871	539	1768.37270	639	2096.45669	739	2424.54068	839	2752.62467	939	3080.70866
40	131.23360	140	459.31759	240	787.40157	340	1115.48556	440	1443.56955	540	1771.65354	640	2099.73753	740	2427.82152	840	2755.90551	940	3083.98950
41	134.51444	141	462.59843	241	790.68241	341	1118.76640	441	1446.85039	541	1774.93438	641	2103.01837	741	2431.10236	841	2759.18635	941	3087.27034
42	137.79528	142	465.87927	242	793.96325	342	1122.04724	442	1450.13123	542	1778.21522	642	2106.29921	742	2434.38320	842	2762.46719	942	3090.55118
43	141.07612	143	469.16010	243	797.24409	343	1125.32808	443	1453.41207	543	1781.49606	643	2109.58005	743	2437.66404	843	2765.74803	943	3093.83202
44	144.35696	144	472.44094	244	800.52493	344	1128.60892	444	1456.69291	544	1784.77690	644	2112.86089	744	2440.94488	844	2769.02887	944	3097.11286
45	147.63780	145	475.72178	245	803.80577	345	1131.88976	445	1459.97375	545	1788.05774	645	2116.14173	745	2444.22572	845	2772.30971	945	3100.39370
46	150.91864	146	479.00262	246	807.08661	346	1135.17060	446	1463.25459	546	1791.33858	646	2119.42257	746	2447.50656	846	2775.59055	946	3103.67454
47	154.19948	147	482.28346	247	810.36745	347	1138.45144	447	1466.53543	547	1794.61942	647	2122.70341	747	2450.78740	847	2778.87139	947	3106.95538
48	157.48031	148	485.56430	248	813.64829	348	1141.73228	448	1469.81627	548	1797.90026	648	2125.98425	748	2454.06824	848	2782.15223	948	3110.23622
49	160.76115	149	488.84514	249	816.92913	349	1145.01312	449	1473.09711	549	1801.18110	649	2129.26509	749	2457.34908	849	2785.43307	949	3113.51706

50	164.04199	150	492.12598	250	820.20997	350	1148.29396	450	1476.37795	550	1804.46194	650	2132.54593	750	2460.62992	850	2788.71391	950	3116.79790
51	167.32283	151	495.40682	251	823.49081	351	1151.57480	451	1479.65879	551	1807.74278	651	2135.82677	751	2463.91076	851	2791.99475	951	3120.07874
52	170.60367	152	498.68766	252	826.77165	352	1154.85564	452	1482.93963	552	1811.02362	652	2139.10761	752	2467.19160	852	2795.27559	952	3123.35958
53	173.88451	153	501.96850	253	830.05249	353	1158.13648	453	1486.22047	553	1814.30446	653	2142.38845	753	2470.47244	853	2798.55643	953	3126.64042
54	177.16535	154	505.24934	254	833.33333	354	1161.41732	454	1489.50131	554	1817.58530	654	2145.66929	754	2473.75328	854	2801.83727	954	3129.92126
55	180.44619	155	508.53018	255	836.61417	355	1164.69816	455	1492.78215	555	1820.86614	655	2148.95013	755	2477.03412	855	2805.11811	955	3133.20210
56	183.72703	156	511.81102	256	839.89501	356	1167.97900	456	1496.06299	556	1824.14698	656	2152.23097	756	2480.31496	856	2808.39895	956	3136.48294
57	187.00787	157	515.09186	257	843.17585	357	1171.25984	457	1499.34383	557	1827.42782	657	2155.51181	757	2483.59580	857	2811.67979	957	3139.76378
58	190.28871	158	518.37270	258	846.45669	358	1174.54068	458	1502.62467	558	1830.70866	658	2158.79265	758	2486.87664	858	2814.96063	958	3143.04462
59	193.56955	159	521.65354	259	849.73753	359	1177.82152	459	1505.90551	559	1833.98950	659	2162.07349	759	2490.15748	859	2818.24147	959	3146.32546
60	196.85039	160	524.93438	260	853.01837	360	1181.10236	460	1509.18635	560	1837.27034	660	2165.35433	760	2493.43832	860	2821.52231	960	3149.60630
61	200.13123	161	528.21522	261	856.29921	361	1184.38320	461	1512.46719	561	1840.55118	661	2168.63517	761	2496.71916	861	2824.80315	961	3152.88714
62	203.41207	162	531.49606	262	859.58005	362	1187.66404	462	1515.74803	562	1843.83202	662	2171.91601	762	2500.00000	862	2828.08399	962	3156.16798
63	206.69291	163	534.77690	263	862.86089	363	1190.94488	463	1519.02887	563	1847.11286	663	2175.19685	763	2503.28084	863	2831.36483	963	3159.44882
64	209.97375	164	538.05774	264	866.14173	364	1194.22572	464	1522.30971	564	1850.39370	664	2178.47769	764	2506.56168	864	2834.64567	964	3162.72966
65	213.25459	165	541.33858	265	869.42257	365	1197.50656	465	1525.59055	565	1853.67454	665	2181.75853	765	2509.84252	865	2837.92651	965	3166.01050
66	216.53543	166	544.61942	266	872.70341	366	1200.78740	466	1528.87139	566	1856.95538	666	2185.03937	766	2513.12336	866	2841.20735	966	3169.29134
67	219.81627	167	547.90026	267	875.98425	367	1204.06824	467	1532.15223	567	1860.23622	667	2188.32021	767	2516.40420	867	2844.48819	967	3172.57218
68	223.09711	168	551.18110	268	879.26509	368	1207.34908	468	1535.43307	568	1863.51706	668	2191.60105	768	2519.68504	868	2847.76903	968	3175.85302
69	226.37795	169	554.46194	269	882.54593	369	1210.62992	469	1538.71391	569	1866.79790	669	2194.88189	769	2522.96588	869	2851.04987	969	3179.13386
70	229.65879	170	557.74278	270	885.82677	370	1213.91076	470	1541.99475	570	1870.07874	670	2198.16273	770	2526.24672	870	2854.33071	970	3182.41470
71	232.93963	171	561.02362	271	889.10761	371	1217.19160	471	1545.27559	571	1873.35958	671	2201.44357	771	2529.52756	871	2857.61155	971	3185.69554
72	236.22047	172	564.30446	272	892.38845	372	1220.47244	472	1548.55643	572	1876.64042	672	2204.72441	772	2532.80840	872	2860.89239	972	3188.97638
73	239.50131	173	567.58530	273	895.66929	373	1223.75328	473	1551.83727	573	1879.92126	673	2208.00525	773	2536.08924	873	2864.17323	973	3192.25722
74	242.78215	174	570.86614	274	898.95013	374	1227.03412	474	1555.11811	574	1883.20210	674	2211.28609	774	2539.37008	874	2867.45407	974	3195.53806
75	246.06299	175	574.14698	275	902.23097	375	1230.31496	475	1558.39895	575	1886.48294	675	2214.56693	775	2542.65092	875	2870.73491	975	3198.81890
76	249.34383	176	577.42782	276	905.51181	376	1233.59580	476	1561.67979	576	1889.76378	676	2217.84777	776	2545.93176	876	2874.01575	976	3202.09974
77	252.62467	177	580.70866	277	908.79265	377	1236.87664	477	1564.96063	577	1893.04462	677	2221.12861	777	2549.21260	877	2877.29659	977	3205.38058
78	255.90551	178	583.98950	278	912.07349	378	1240.15748	478	1568.24147	578	1896.32546	678	2224.40945	778	2552.49344	878	2880.57743	978	3208.66142
79	259.18635	179	587.27034	279	915.35433	379	1243.43832	479	1571.52231	579	1899.60630	679	2227.69029	779	2555.77428	879	2883.85827	979	3211.94226
80	262.46719	180	590.55118	280	918.63517	380	1246.71916	480	1574.80315	580	1902.88714	680	2230.97113	780	2559.05512	880	2887.13911	980	3215.22310
81	265.74803	181	593.83202	281	921.91601	381	1250.00000	481	1578.08399	581	1906.16798	681	2234.25197	781	2562.33596	881	2890.41995	981	3218.50394
82	269.02887	182	597.11286	282	925.19685	382	1253.28084	482	1581.36483	582	1909.44882	682	2237.53281	782	2565.61680	882	2893.70079	982	3221.78478
83	272.30971	183	600.39370	283	928.47769	383	1256.56168	483	1584.64567	583	1912.72966	683	2240.81365	783	2568.89764	883	2896.98163	983	3225.06562
84	275.59055	184	603.67454	284	931.75853	384	1259.84252	484	1587.92651	584	1916.01050	684	2244.09449	784	2572.17848	884	2900.26247	984	3228.34646
85	278.87139	185	606.95538	285	935.03937	385	1263.12336	485	1591.20735	585	1919.29134	685	2247.37533	785	2575.45932	885	2903.54331	985	3231.62730
86	282.15223	186	610.23622	286	938.32021	386	1266.40420	486	1594.48819	586	1922.57218	686	2250.65617	786	2578.74016	886	2906.82415	986	3234.90814
87	285.43307	187	613.51706	287	941.60105	387	1269.68504	487	1597.76903	587	1925.85302	687	2253.93701	787	2582.02100	887	2910.10499	987	3238.18898
88	288.71391	188	616.79790	288	944.88189	388	1272.96588	488	1601.04987	588	1929.13386	688	2257.21785	788	2585.30184	888	2913.38583	988	3241.46982
89	291.99475	189	620.07874	289	948.16273	389	1276.24672	489	1604.33071	589	1932.41470	689	2260.49869	789	2588.58268	889	2916.66667	989	3244.75066
90	295.27559	190	623.35958	290	951.44357	390	1279.52756	490	1607.61155	590	1935.69554	690	2263.77953	790	2591.86352	890	2919.94751	990	3248.03150
91	298.55643	191	626.64042	291	954.72441	391	1282.80840	491	1610.89239	591	1938.97638	691	2267.06037	791	2595.14436	891	2923.22835	991	3251.31234
92	301.83727	192	629.92126	292	958.00525	392	1286.08924	492	1614.17323	592	1942.25722	692	2270.34121	792	2598.42520	892	2926.50919	992	3254.59318
93	305.11811	193	633.20210	293	961.28609	393	1289.37008	493	1617.45407	593	1945.53806	693	2273.62205	793	2601.70604	893	2929.79003	993	3257.87402
94	308.39895	194	636.48294	294	964.56693	394	1292.65092	494	1620.73491	594	1948.81890	694	2276.90289	794	2604.98688	894	2933.07087	994	3261.15486
95	311.67979	195	639.76378	295	967.84777	395	1295.93176	495	1624.01575	595	1952.09974	695	2280.18373	795	2608.26772	895	2936.35171	995	3264.43570
96	314.96063	196	643.04462	296	971.12861	396	1299.21260	496	1627.29659	596	1955.38058	696	2283.46457	796	2611.54856	896	2939.63255	996	3267.71654
97	318.24147	197	646.32546	297	974.40945	397	1302.49344	497	1630.57743	597	1958.66142	697	2286.74541	797	2614.82940	897	2942.91339	997	3270.99738
98	321.52231	198	649.60630	298	977.69029	398	1305.77428	498	1633.85827	598	1961.94226	698	2290.02625	798	2618.11024	898	2946.19423	998	3274.27822
99	324.80315	199	652.88714	299	980.97113	399	1309.05512	499	1637.13911	599	1965.22310	699	2293.30709	799	2621.39108	899	2949.47507	999	3277.55906

9.3. LENGTH—YARDS TO METERS

[Reduction Factor: 1 yard = 0.9144 meter]

Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters
0		100	91.4400	200	182.8800	300	274.3200	400	365.7600	500	457.2000	600	548.6400	700	640.0800	800	731.5200	900	822.9600
1	0.9144	101	92.3544	201	183.7944	301	275.2344	401	366.6744	501	458.1144	601	549.5544	701	640.9944	801	732.4344	901	823.8744
2	1.8288	102	93.2688	202	184.7088	302	276.1488	402	367.5888	502	459.0288	602	550.4688	702	641.9088	802	733.3488	902	824.7888
3	2.7432	103	94.1832	203	185.6232	303	277.0632	403	368.5032	503	459.9432	603	551.3832	703	642.8232	803	734.2632	903	825.7032
4	3.6576	104	95.0976	204	186.5376	304	277.9776	404	369.4176	504	460.8576	604	552.2976	704	643.7376	804	735.1776	904	826.6176
5	4.5720	105	96.0120	205	187.4520	305	278.8920	405	370.3320	505	461.7720	605	553.2120	705	644.6520	805	736.0920	905	827.5320
6	5.4864	106	96.9264	206	188.3664	306	279.8064	406	371.2464	506	462.6864	606	554.1264	706	645.5664	806	737.0064	906	828.4464
7	6.4008	107	97.8408	207	189.2808	307	280.7208	407	372.1608	507	463.6008	607	555.0408	707	646.4808	807	737.9208	907	829.3608
8	7.3152	108	98.7552	208	190.1952	308	281.6352	408	373.0752	508	464.5152	608	555.9552	708	647.3952	808	738.8352	908	830.2752
9	8.2296	109	99.6696	209	191.1096	309	282.5496	409	373.9896	509	465.4296	609	556.8696	709	648.3096	809	739.7496	909	831.1896
10	9.1440	110	100.5840	210	192.0240	310	283.4640	410	374.9040	510	466.3440	610	557.7840	710	649.2240	810	740.6640	910	832.1040
11	10.0584	111	101.4984	211	192.9384	311	284.3784	411	375.8184	511	467.2584	611	558.6984	711	650.1384	811	741.5784	911	833.0184
12	10.9728	112	102.4128	212	193.8528	312	285.2928	412	376.7328	512	468.1728	612	559.6128	712	651.0528	812	742.4928	912	833.9328
13	11.8872	113	103.3272	213	194.7672	313	286.2072	413	377.6472	513	469.0872	613	560.5272	713	651.9672	813	743.4072	913	834.8472
14	12.8016	114	104.2416	214	195.6816	314	287.1216	414	378.5616	514	470.0016	614	561.4416	714	652.8816	814	744.3216	914	835.7616
15	13.7160	115	105.1560	215	196.5960	315	288.0360	415	379.4760	515	470.9160	615	562.3560	715	653.7960	815	745.2360	915	836.6760
16	14.6304	116	106.0704	216	197.5104	316	288.9504	416	380.3904	516	471.8304	616	563.2704	716	654.7104	816	746.1504	916	837.5904
17	15.5448	117	106.9848	217	198.4248	317	289.8648	417	381.3048	517	472.7448	617	564.1848	717	655.6248	817	747.0648	917	838.5048
18	16.4592	118	107.8992	218	199.3392	318	290.7792	418	382.2192	518	473.6592	618	565.0992	718	656.5392	818	747.9792	918	839.4192
19	17.3736	119	108.8136	219	200.2536	319	291.6936	419	383.1336	519	474.5736	619	566.0136	719	657.4536	819	748.8936	919	840.3336
20	18.2880	120	109.7280	220	201.1680	320	292.6080	420	384.0480	520	475.4880	620	566.9280	720	658.3680	820	749.8080	920	841.2480
21	19.2024	121	110.6424	221	202.0824	321	293.5224	421	384.9624	521	476.4024	621	567.8424	721	659.2824	821	750.7224	921	842.1624
22	20.1168	122	111.5568	222	202.9968	322	294.4368	422	385.8768	522	477.3168	622	568.7568	722	660.1968	822	751.6368	922	843.0768
23	21.0312	123	112.4712	223	203.9112	323	295.3512	423	386.7912	523	478.2312	623	569.6712	723	661.1112	823	752.5512	923	843.9912
24	21.9456	124	113.3856	224	204.8256	324	296.2656	424	387.7056	524	479.1456	624	570.5856	724	662.0256	824	753.4656	924	844.9056
25	22.8600	125	114.3000	225	205.7400	325	297.1800	425	388.6200	525	480.0600	625	571.5000	725	662.9400	825	754.3800	925	845.8200
26	23.7744	126	115.2144	226	206.6544	326	298.0944	426	389.5344	526	480.9744	626	572.4144	726	663.8544	826	755.2944	926	846.7344
27	24.6888	127	116.1288	227	207.5688	327	299.0088	427	390.4488	527	481.8888	627	573.3288	727	664.7688	827	756.2088	927	847.6488
28	25.6032	128	117.0432	228	208.4832	328	299.9232	428	391.3632	528	482.8032	628	574.2432	728	665.6832	828	757.1232	928	848.5632
29	26.5176	129	117.9576	229	209.3976	329	300.8376	429	392.2776	529	483.7176	629	575.1576	729	666.5976	829	758.0376	929	849.4776
30	27.4320	130	118.8720	230	210.3120	330	301.7520	430	393.1920	530	484.6320	630	576.0720	730	667.5120	830	758.9520	930	850.3920
31	28.3464	131	119.7864	231	211.2264	331	302.6664	431	394.1064	531	485.5464	631	576.9864	731	668.4264	831	759.8664	931	851.3064
32	29.2608	132	120.7008	232	212.1408	332	303.5808	432	395.0208	532	486.4608	632	577.9008	732	669.3408	832	760.7808	932	852.2208
33	30.1752	133	121.6152	233	213.0552	333	304.4952	433	395.9352	533	487.3752	633	578.8152	733	670.2552	833	761.6952	933	853.1352
34	31.0896	134	122.5296	234	213.9696	334	305.4096	434	396.8496	534	488.2896	634	579.7296	734	671.1696	834	762.6096	934	854.0496
35	32.0040	135	123.4440	235	214.8840	335	306.3240	435	397.7640	535	489.2040	635	580.6440	735	672.0840	835	763.5240	935	854.9640
36	32.9184	136	124.3584	236	215.7984	336	307.2384	436	398.6784	536	490.1184	636	581.5584	736	672.9984	836	764.4384	936	855.8784
37	33.8328	137	125.2728	237	216.7128	337	308.1528	437	399.5928	537	491.0328	637	582.4728	737	673.9128	837	765.3528	937	856.7928
38	34.7472	138	126.1872	238	217.6272	338	309.0672	438	400.5072	538	491.9472	638	583.3872	738	674.8272	838	766.2672	938	857.7072
39	35.6616	139	127.1016	239	218.5416	339	309.9816	439	401.4216	539	492.8616	639	584.3016	739	675.7416	839	767.1816	939	858.6216
40	36.5760	140	128.0160	240	219.4560	340	310.8960	440	402.3360	540	493.7760	640	585.2160	740	676.6560	840	768.0960	940	859.5360
41	37.4904	141	128.9304	241	220.3704	341	311.8104	441	403.2504	541	494.6904	641	586.1304	741	677.5704	841	769.0104	941	860.4504
42	38.4048	142	129.8448	242	221.2848	342	312.7248	442	404.1648	542	495.6048	642	587.0448	742	678.4848	842	769.9248	942	861.3648
43	39.3192	143	130.7592	243	222.1992	343	313.6392	443	405.0792	543	496.5192	643	587.9592	743	679.3992	843	770.8392	943	862.2792
44	40.2336	144	131.6736	244	223.1136	344	314.5536	444	405.9936	544	497.4336	644	588.8736	744	680.3136	844	771.7536	944	863.1936
45	41.1480	145	132.5880	245	224.0280	345	315.4680	445	406.9080	545	498.3480	645	589.7880	745	681.2280	845	772.6680	945	864.1080
46	42.0624	146	133.5024	246	224.9424	346	316.3824	446	407.8224	546	499.2624	646	590.7024	746	682.1424	846	773.5824	946	865.0224
47	42.9768	147	134.4168	247	225.8568	347	317.2968	447	408.7368	547	500.1768	647	591.6168	747	683.0568	847	774.4968	947	865.9368
48	43.8912	148	135.3312	248	226.7712	348	318.2112	448	409.6512	548	501.0912	648	592.5312	748	683.9712	848	775.4112	948	866.8512
49	44.8056	149	136.2456	249	227.6856	349	319.1256	449	410.5656	549	502.0056	649	593.4456	749	684.8856	849	776.3256	949	867.7656

50	45.7200	150	137.1600	250	228.6000	350	320.0400	450	411.4800	550	502.9200	650	594.3600	750	685.8000	850	777.2400	950	868.6800
51	46.6344	151	138.0744	251	229.5144	351	320.9544	451	412.3944	551	503.8344	651	595.2744	751	686.7144	851	778.1544	951	869.5944
52	47.5488	152	138.9888	252	230.4288	352	321.8688	452	413.3088	552	504.7488	652	596.1888	752	687.6288	852	779.0688	952	870.5088
53	48.4632	153	139.9032	253	231.3432	353	322.7832	453	414.2232	553	505.6632	653	597.1032	753	688.5432	853	779.9832	953	871.4232
54	49.3776	154	140.8176	254	232.2576	354	323.6976	454	415.1376	554	506.5776	654	598.0176	754	689.4576	854	780.8976	954	872.3376
55	50.2920	155	141.7320	255	233.1720	355	324.6120	455	416.0520	555	507.4920	655	598.9320	755	690.3720	855	781.8120	955	873.2520
56	51.2064	156	142.6464	256	234.0864	356	325.5264	456	416.9664	556	508.4064	656	599.8464	756	691.2864	856	782.7264	956	874.1664
57	52.1208	157	143.5608	257	235.0008	357	326.4408	457	417.8808	557	509.3208	657	600.7608	757	692.2008	857	783.6408	957	875.0808
58	53.0352	158	144.4752	258	235.9152	358	327.3552	458	418.7952	558	510.2352	658	601.6752	758	693.1152	858	784.5552	958	875.9952
59	53.9496	159	145.3896	259	236.8296	359	328.2696	459	419.7096	559	511.1496	659	602.5896	759	694.0296	859	785.4696	959	876.9096
60	54.8640	160	146.3040	260	237.7440	360	329.1840	460	420.6240	560	512.0640	660	603.5040	760	694.9440	860	786.3840	960	877.8240
61	55.7784	161	147.2184	261	238.6584	361	330.0984	461	421.5384	561	512.9784	661	604.4184	761	695.8584	861	787.2984	961	878.7384
62	56.6928	162	148.1328	262	239.5728	362	331.0128	462	422.4528	562	513.8928	662	605.3328	762	696.7728	862	788.2128	962	879.6528
63	57.6072	163	149.0472	263	240.4872	363	331.9272	463	423.3672	563	514.8072	663	606.2472	763	697.6872	863	789.1272	963	880.5672
64	58.5216	164	149.9616	264	241.4016	364	332.8416	464	424.2816	564	515.7216	664	607.1616	764	698.6016	864	790.0416	064	881.4816
65	59.4360	165	150.8760	265	242.3160	365	333.7560	465	425.1960	565	516.6360	665	608.0760	765	699.5160	865	790.9560	965	882.3960
66	60.3504	166	151.7904	266	243.2304	366	334.6704	466	426.1104	566	517.5504	666	608.9904	766	700.4304	866	791.8704	966	883.3104
67	61.2648	167	152.7048	267	244.1448	367	335.5848	467	427.0248	567	518.4648	667	609.9048	767	701.3448	867	792.7848	967	884.2248
68	62.1792	168	153.6192	268	245.0592	368	336.4992	468	427.9392	568	519.3792	668	610.8192	768	702.2592	868	793.6992	968	885.1392
69	63.0936	169	154.5336	269	245.9736	369	337.4136	469	428.8536	569	520.2936	669	611.7336	769	703.1736	869	794.6136	969	886.0536
70	64.0080	170	155.4480	270	246.8880	370	338.3280	470	429.7680	570	521.2080	670	612.6480	770	704.0880	870	795.5280	970	886.9680
71	64.9224	171	156.3624	271	247.8024	371	339.2424	471	430.6824	571	522.1224	671	613.5624	771	705.0024	871	796.4424	971	887.8824
72	65.8368	172	157.2768	272	248.7168	372	340.1568	472	431.5968	572	523.0368	672	614.4768	772	705.9168	872	797.3568	972	888.7968
73	66.7512	173	158.1912	273	249.6312	373	341.0712	473	432.5112	573	523.9512	673	615.3912	773	706.8312	873	798.2712	973	889.7112
74	67.6656	174	159.1056	274	250.5456	374	341.9856	474	433.4256	574	524.8656	674	616.3056	774	707.7456	874	799.1856	974	890.6256
75	68.5800	175	160.0200	275	251.4600	375	342.9000	475	434.3400	575	525.7800	675	617.2200	775	708.6600	875	800.1000	975	891.5400
76	69.4944	176	160.9344	276	252.3744	376	343.8144	476	435.2544	576	526.6944	676	618.1344	776	709.5744	876	801.0144	976	892.4544
77	70.4088	177	161.8488	277	253.2888	377	344.7288	477	436.1688	577	527.6088	677	619.0488	777	710.4888	877	801.9288	977	893.3688
78	71.3232	178	162.7632	278	254.2032	378	345.6432	478	437.0832	578	528.5232	678	619.9632	778	711.4032	878	802.8432	978	894.2832
79	72.2376	179	163.6776	279	255.1176	379	346.5576	479	437.9976	579	529.4376	679	620.8776	779	712.3176	879	803.7576	979	895.1976
80	73.1520	180	164.5920	280	256.0320	380	347.4720	480	438.9120	580	530.3520	680	621.7920	780	713.2320	880	804.6720	980	896.1120
81	74.0664	181	165.5064	281	256.9464	381	348.3864	481	439.8264	581	531.2664	681	622.7064	781	714.1464	881	805.5864	981	897.0264
82	74.9808	182	166.4208	282	257.8608	382	349.3008	482	440.7408	582	532.1808	682	623.6208	782	715.0608	882	806.5008	982	897.9408
83	75.8952	183	167.3352	283	258.7752	383	350.2152	483	441.6552	583	533.0952	683	624.5352	783	715.9752	883	807.4152	983	898.8552
84	76.8096	184	168.2496	284	259.6896	384	351.1296	484	442.5696	584	534.0096	684	625.4496	784	716.8896	884	808.3296	984	899.7696
85	77.7240	185	169.1640	285	260.6040	385	352.0440	485	443.4840	585	534.9240	685	626.3640	785	717.8040	885	809.2440	985	900.6840
86	78.6384	186	170.0784	286	261.5184	386	352.9584	486	444.3984	586	535.8384	686	627.2784	786	718.7184	886	810.1584	986	901.5984
87	79.5528	187	170.9928	287	262.4328	387	353.8728	487	445.3128	587	536.7528	687	628.1928	787	719.6328	887	811.0728	987	902.5128
88	80.4672	188	171.9072	288	263.3472	388	354.7872	488	446.2272	588	537.6672	688	629.1072	788	720.5472	888	811.9872	988	903.4272
89	81.3816	189	172.8216	289	264.2616	389	355.7016	489	447.1416	589	538.5816	689	630.0216	789	721.4616	889	812.9016	989	904.3416
90	82.2960	190	173.7360	290	265.1760	390	356.6160	490	448.0560	590	539.4960	690	630.9360	790	722.3760	890	813.8160	990	905.2560
91	83.2104	191	174.6504	291	266.0904	391	357.5304	491	448.9704	591	540.4104	691	631.8504	791	723.2904	891	814.7304	991	906.1704
92	84.1248	192	175.5648	292	267.0048	392	358.4448	492	449.8848	592	541.3248	692	632.7648	792	724.2048	892	815.6448	992	907.0848
93	85.0392	193	176.4792	293	267.9192	393	359.3592	493	450.7992	593	542.2392	693	633.6792	793	725.1192	893	816.5592	993	907.9992
94	85.9536	194	177.3936	294	268.8336	394	360.2736	494	451.7136	594	543.1536	694	634.5936	794	726.0336	894	817.4736	994	908.9136
95	86.8680	195	178.3080	295	269.7480	395	361.1880	495	452.6280	595	544.0680	695	635.5080	795	726.9480	895	818.3880	995	909.8280
96	87.7824	196	179.2224	296	270.6624	396	362.1024	496	453.5424	596	544.9824	696	636.4224	796	727.8624	896	819.3024	996	910.7424
97	88.6968	197	180.1368	297	271.5768	397	363.0168	497	454.4568	597	545.8968	697	637.3368	797	728.7768	897	820.2168	997	911.6568
98	89.6112	198	181.0512	298	272.4912	398	363.9312	498	455.3712	598	546.8112	698	638.2512	798	729.6912	898	821.1312	998	912.5712
99	90.5256	199	181.9656	299	273.4056	399	364.8456	499	456.2856	599	547.7256	699	639.1656	799	730.6056	899	822.0456	999	913.4856

9.4. LENGTH—METERS TO YARDS

[Reduction Factor: 1 meter = 1.093 613 298 yards]

Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards	Meters	Yards
0		100	109.36133	200	218.72266	300	328.08399	400	437.44532	500	546.80665	600	656.16798	700	765.52931	800	874.89064	900	984.25197
1	1.09361	101	110.45494	201	219.81627	301	329.17760	401	438.53893	501	547.90026	601	657.26159	701	766.62292	801	875.98425	901	985.34558
2	2.18723	102	111.54856	202	220.90989	302	330.27122	402	439.63255	502	548.99388	602	658.35521	702	767.71654	802	877.07786	902	986.43919
3	3.28084	103	112.64217	203	222.00350	303	331.36483	403	440.72616	503	550.08749	603	659.44882	703	768.81015	803	878.17148	903	987.53281
4	4.37445	104	113.73578	204	223.09711	304	332.45844	404	441.81977	504	551.18110	604	660.54243	704	769.90376	804	879.26509	904	988.62642
5	5.46807	105	114.82940	205	224.19073	305	333.55206	405	442.91339	505	552.27472	605	661.63605	705	770.99738	805	880.35870	905	989.72003
6	6.56168	106	115.92301	206	225.28434	306	334.64567	406	444.00700	506	553.36833	606	662.72966	706	772.09099	806	881.45232	906	990.81365
7	7.65529	107	117.01662	207	226.37795	307	335.73928	407	445.10061	507	554.46194	607	663.82327	707	773.18460	807	882.54593	907	991.90726
8	8.74891	108	118.11024	208	227.47157	308	336.83290	408	446.19423	508	555.55556	608	664.91689	708	774.27821	808	883.63954	908	993.00087
9	9.84252	109	119.20385	209	228.56518	309	337.92651	409	447.28784	509	556.64917	609	666.01050	709	775.37183	809	884.73316	909	994.09449
10	10.93613	110	120.29746	210	229.65879	310	339.02012	410	448.38145	510	557.74278	610	667.10411	710	776.46544	810	885.82677	910	995.18810
11	12.02975	111	121.39108	211	230.75241	311	340.11374	411	449.47507	511	558.83640	611	668.19773	711	777.55905	811	886.92038	911	996.28171
12	13.12336	112	122.48469	212	231.84602	312	341.20735	412	450.56868	512	559.93001	612	669.29134	712	778.65267	812	888.01400	912	997.37533
13	14.21697	113	123.57830	213	232.93963	313	342.30096	413	451.66229	513	561.02362	613	670.38495	713	779.74628	813	889.10761	913	998.46894
14	15.31059	114	124.67192	214	234.03325	314	343.39458	414	452.75591	514	562.11724	614	671.47856	714	780.83989	814	890.20122	914	999.56255
15	16.40420	115	125.76553	215	235.12686	315	344.48819	415	453.84952	515	563.21085	615	672.57218	715	781.93351	815	891.29484	915	1000.65617
16	17.49781	116	126.85914	216	236.22047	316	345.58180	416	454.94313	516	564.30446	616	673.66579	716	783.02712	816	892.38845	916	1001.74978
17	18.59143	117	127.95276	217	237.31409	317	346.67542	417	456.03675	517	565.39808	617	674.75940	717	784.12073	817	893.48206	917	1002.84339
18	19.68504	118	129.04637	218	238.40770	318	347.76903	418	457.13036	518	566.49169	618	675.85302	718	785.21435	818	894.57568	918	1003.93701
19	20.77865	119	130.13998	219	239.50131	319	348.86264	419	458.22397	519	567.58530	619	676.94663	719	786.30796	819	895.66929	919	1005.03062
20	21.87227	120	131.23360	220	240.59493	320	349.95626	420	459.31759	520	568.67891	620	678.04024	720	787.40157	820	896.76290	920	1006.12423
21	22.96588	121	132.32721	221	241.68854	321	351.04987	421	460.41120	521	569.77253	621	679.13386	721	788.49519	821	897.85652	921	1007.21785
22	24.05948	122	133.42082	222	242.78215	322	352.14348	422	461.50481	522	570.86614	622	680.22747	722	789.58880	822	898.95013	922	1008.31146
23	25.15311	123	134.51444	223	243.87577	323	353.23710	423	462.59843	523	571.95975	623	681.32108	723	790.68241	823	900.04374	923	1009.40507
24	26.24672	124	135.60805	224	244.96938	324	354.33071	424	463.69204	524	573.05337	624	682.41470	724	791.77603	824	901.13736	924	1010.49869
25	27.34033	125	136.70166	225	246.06299	325	355.42432	425	464.78565	525	574.14698	625	683.50831	725	792.86964	825	902.23097	925	1011.59230
26	28.43395	126	137.79528	226	247.15661	326	356.51794	426	465.87926	526	575.24059	626	684.60192	726	793.96325	826	903.32458	926	1012.68591
27	29.52755	127	138.88889	227	248.25022	327	357.61155	427	466.97288	527	576.33421	627	685.69554	727	795.05687	827	904.41820	927	1013.77953
28	30.62117	128	139.98250	228	249.34383	328	358.70516	428	468.06649	528	577.42782	628	686.78915	728	796.15048	828	905.51181	928	1014.87314
29	31.71479	129	141.07612	229	250.43745	329	359.79878	429	469.16010	529	578.52143	629	687.88276	729	797.24409	829	906.60542	929	1015.96675
30	32.80840	130	142.16973	230	251.53106	330	360.89239	430	470.25372	530	579.61505	630	688.97638	730	798.33771	830	907.69904	930	1017.06037
31	33.90201	131	143.26334	231	252.62467	331	361.98600	431	471.34733	531	580.70866	631	690.06999	731	799.43132	831	908.79265	931	1018.15398
32	34.99563	132	144.35696	232	253.71829	332	363.07961	432	472.44094	532	581.80227	632	691.16360	732	800.52493	832	909.88626	932	1019.24759
33	36.08924	133	145.45057	233	254.81190	333	364.17323	433	473.53456	533	582.89589	633	692.25722	733	801.61855	833	910.97988	933	1020.34121
34	37.18285	134	146.54418	234	255.90551	334	365.26684	434	474.62817	534	583.98950	634	693.35083	734	802.71216	834	912.07349	934	1021.43482
35	38.27647	135	147.63780	235	256.99913	335	366.36045	435	475.72178	535	585.08311	635	694.44444	735	803.80577	835	913.16710	935	1022.52843
36	39.37008	136	148.73141	236	258.09274	336	367.45407	436	476.81540	536	586.17673	636	695.53806	736	804.89939	836	914.26072	936	1023.62205
37	40.46369	137	149.82502	237	259.18635	337	368.54768	437	477.90901	537	587.27034	637	696.63167	737	805.99300	837	915.35433	937	1024.71566
38	41.55731	138	150.91864	238	260.27996	338	369.64129	438	479.00262	538	588.36395	638	697.72528	738	807.08661	838	916.44794	938	1025.80927
39	42.65092	139	152.01225	239	261.37358	339	370.73491	439	480.09624	539	589.45757	639	698.81890	739	808.18023	839	917.54156	939	1026.90289
40	43.74453	140	153.10586	240	262.46719	340	371.82852	440	481.18985	540	590.55118	640	699.91251	740	809.27384	840	918.63517	940	1027.99650
41	44.83815	141	154.19948	241	263.56080	341	372.92213	441	482.28346	541	591.64479	641	701.00612	741	810.36745	841	919.72878	941	1029.09011
42	45.93176	142	155.29309	242	264.65442	342	374.01575	442	483.37708	542	592.73841	642	702.09974	742	811.46107	842	920.82240	942	1030.18373
43	47.02537	143	156.38670	243	265.74803	343	375.10936	443	484.47069	543	593.83202	643	703.19335	743	812.55468	843	921.91601	943	1031.27734
44	48.11899	144	157.48031	244	266.84164	344	376.20297	444	485.56430	544	594.92563	644	704.28696	744	813.64829	844	923.00962	944	1032.37095
45	49.21260	145	158.57393	245	267.93526	345	377.29659	445	486.65792	545	596.01925	645	705.38058	745	814.74191	845	924.10324	945	1033.46457
46	50.30621	146	159.66754	246	269.02887	346	378.39020	446	487.75153	546	597.11286	646	706.47419	746	815.83552	846	925.19685	946	1034.55818
47	51.39983	147	160.76115	247	270.12248	347	379.48381	447	488.84514	547	598.20647	647	707.56780	747	816.92913	847	926.29046	947	1035.65179
48	52.49344	148	161.85477	248	271.21610	348	380.57743	448	489.93876	548	599.30009	648	708.66142	748	818.02275	848	927.38408	948	1036.74541
49	53.58705	149	162.94838	249	272.30971	349	381.67104	449	491.03237	549	600.39370	649	709.75503	749	819.11636	849	928.47769	949	1037.83902

50	54.68066	150	164.04199	250	273.40332	350	382.76465	450	492.12598	550	601.48731	650	710.84864	750	820.20997	850	929.57130	950	1038.93263
51	55.77428	151	165.13561	251	274.49694	351	383.85827	451	493.21960	551	602.58093	651	711.94226	751	821.30359	851	930.66492	951	1040.02625
52	56.86789	152	166.22922	252	275.59055	352	384.95188	452	494.31321	552	603.67454	652	713.03587	752	822.39720	852	931.75853	952	1041.11986
53	57.96150	153	167.32283	253	276.68416	353	386.04549	453	495.40682	553	604.76815	653	714.12948	753	823.49081	853	932.85214	953	1042.21347
54	59.05512	154	168.41645	254	277.77778	354	387.13911	454	496.50044	554	605.86177	654	715.22310	754	824.58443	854	933.94576	954	1043.30709
55	60.14873	155	169.51006	255	278.87139	355	388.23272	455	497.59405	555	606.95538	655	716.31671	755	825.67804	855	935.03937	955	1044.40070
56	61.24234	156	170.60367	256	279.96500	356	389.32633	456	498.68766	556	608.04899	656	717.41032	756	826.77165	856	936.13298	956	1045.49431
57	62.33596	157	171.69729	257	281.05862	357	390.41995	457	499.78128	557	609.14261	657	718.50394	757	827.86527	857	937.22660	957	1046.58793
58	63.42957	158	172.79090	258	282.15223	358	391.51356	458	500.87489	558	610.23622	658	719.59755	758	828.95888	858	938.32021	958	1047.68154
59	64.52318	159	173.88451	259	283.24584	359	392.60717	459	501.96850	559	611.32983	659	720.69116	759	830.05249	859	939.41382	959	1048.77515
60	65.61680	160	174.97813	260	284.33946	360	393.70079	460	503.06212	560	612.42345	660	721.78478	760	831.14611	860	940.50744	960	1049.86877
61	66.71041	161	176.07174	261	285.43307	361	394.79440	461	504.15573	561	613.51706	661	722.87839	761	832.23972	861	941.60105	961	1050.96238
62	67.80402	162	177.16535	262	286.52668	362	395.88801	462	505.24934	562	614.61067	662	723.97200	762	833.33333	862	942.69466	962	1052.05599
63	68.89764	163	178.25897	263	287.62030	363	396.98163	463	506.34296	563	615.70429	663	725.06562	763	834.42695	863	943.78828	963	1053.14961
64	69.99125	164	179.35258	264	288.71391	364	398.07524	464	507.43657	564	616.79790	664	726.15923	764	835.52056	864	944.88189	964	1054.24322
65	71.08486	165	180.44619	265	289.80752	365	399.16885	465	508.53018	565	617.89151	665	727.25284	765	836.61417	865	945.97550	965	1055.33683
66	72.17848	166	181.53981	266	290.90114	366	400.26247	466	509.62380	566	618.98513	666	728.34646	766	837.70779	866	947.06912	966	1056.43045
67	73.27209	167	182.63342	267	291.99475	367	401.35608	467	510.71741	567	620.07874	667	729.44007	767	838.80140	867	948.16273	967	1057.52406
68	74.36570	168	183.72703	268	293.08836	368	402.44969	468	511.81102	568	621.17235	668	730.53368	768	839.89501	868	949.25634	968	1058.61767
69	75.45932	169	184.82065	269	294.18198	369	403.54331	469	512.90464	569	622.26597	669	731.62730	769	840.98863	869	950.34996	969	1059.71129
70	76.55293	170	185.91426	270	295.27559	370	404.63692	470	513.99825	570	623.35958	670	732.72091	770	842.08224	870	951.44357	970	1060.80490
71	77.64654	171	187.00787	271	296.36920	371	405.73053	471	515.09186	571	624.45319	671	733.81452	771	843.17585	871	952.53718	971	1061.89851
72	78.74016	172	188.10149	272	297.46282	372	406.82415	472	516.18548	572	625.54681	672	734.90814	772	844.26947	872	953.63080	972	1062.99213
73	79.83377	173	189.19510	273	298.55643	373	407.91776	473	517.27909	573	626.64042	673	736.00175	773	845.36308	873	954.72441	973	1064.08574
74	80.92738	174	190.28871	274	299.65004	374	409.01137	474	518.37270	574	627.73403	674	737.09536	774	846.45669	874	955.81802	974	1065.17935
75	82.02100	175	191.38233	275	300.74366	375	410.10499	475	519.46632	575	628.82765	675	738.18898	775	847.55031	875	956.91164	975	1066.27297
76	83.11461	176	192.47594	276	301.83727	376	411.19860	476	520.55993	576	629.92126	676	739.28259	776	848.64392	876	958.00525	976	1067.36658
77	84.20822	177	193.56955	277	302.93088	377	412.29221	477	521.65354	577	631.01487	677	740.37620	777	849.73753	877	959.09886	977	1068.46019
78	85.30184	178	194.66317	278	304.02450	378	413.38583	478	522.74716	578	632.10849	678	741.46982	778	850.83115	878	960.19248	978	1069.55381
79	86.39545	179	195.75678	279	305.11811	379	414.47944	479	523.84077	579	633.20210	679	742.56343	779	851.92476	879	961.28609	979	1070.64742
80	87.48906	180	196.85039	280	306.21172	380	415.57305	480	524.93438	580	634.29571	680	743.65704	780	853.01837	880	962.37970	980	1071.74103
81	88.58268	181	197.94401	281	307.30534	381	416.66667	481	526.02800	581	635.38933	681	744.75066	781	854.11199	881	963.47332	981	1072.83465
82	89.67629	182	199.03762	282	308.39895	382	417.76028	482	527.12161	582	636.48294	682	745.84427	782	855.20560	882	964.56693	982	1073.92826
83	90.76990	183	200.13123	283	309.49256	383	418.85389	483	528.21522	583	637.57655	683	746.93788	783	856.29921	883	965.66054	983	1075.02187
84	91.86352	184	201.22485	284	310.58618	384	419.94751	484	529.30884	584	638.67017	684	748.03150	784	857.39283	884	966.75416	984	1076.11549
85	92.95713	185	202.31846	285	311.67979	385	421.04112	485	530.40245	585	639.76378	685	749.12511	785	858.48644	885	967.84777	985	1077.20910
86	94.05074	186	203.41207	286	312.77340	386	422.13473	486	531.49606	586	640.85739	686	750.21872	786	859.58005	886	968.94138	986	1078.30271
87	95.14436	187	204.50569	287	313.86702	387	423.22835	487	532.58968	587	641.95101	687	751.31234	787	860.67367	887	970.03500	987	1079.39633
88	96.23797	188	205.59930	288	314.96063	388	424.32196	488	533.68329	588	643.04462	688	752.40595	788	861.76728	888	971.12861	988	1080.48994
89	97.33158	189	206.69291	289	316.05424	389	425.41557	489	534.77690	589	644.13823	689	753.49956	789	862.86089	889	972.22222	989	1081.58355
90	98.42520	190	207.78653	290	317.14786	390	426.50919	490	535.87052	590	645.23185	690	754.59318	790	863.95451	890	973.31584	990	1082.67717
91	99.51881	191	208.88014	291	318.24147	391	427.60280	491	536.96413	591	646.32546	691	755.68679	791	865.04812	891	974.40945	991	1083.77078
92	100.61242	192	209.97375	292	319.33508	392	428.69641	492	538.05774	592	647.41907	692	756.78040	792	866.14173	892	975.50306	992	1084.86439
93	101.70604	193	211.06737	293	320.42870	393	429.79003	493	539.15136	593	648.51269	693	757.87402	793	867.23535	893	976.59668	993	1085.95800
94	102.79965	194	212.16098	294	321.52231	394	430.88364	494	540.24497	594	649.60630	694	758.96763	794	868.32896	894	977.69029	994	1087.05162
95	103.89326	195	213.25459	295	322.61592	395	431.97725	495	541.33858	595	650.69991	695	760.06124	795	869.42257	895	978.78390	995	1088.14523
96	104.98688	196	214.34821	296	323.70954	396	433.07087	496	542.43220	596	651.79353	696	761.15486	796	870.51619	896	979.87752	996	1089.23884
97	106.08049	197	215.44182	297	324.80315	397	434.16448	497	543.52581	597	652.88714	697	762.24847	797	871.60980	897	980.97113	997	1090.33246
98	107.17410	198	216.53543	298	325.89676	398	435.25809	498	544.61942	598	653.98075	698	763.34208	798	872.70341	898	982.06474	998	1091.42607
99	108.26772	199	217.62905	299	326.99038	399	436.35171	499	545.71304	599	655.07437	699	764.43570	799	873.79703	899	983.15835	999	1092.51968

9.5. LENGTH—MILES TO KILOMETERS

[Reduction Factor: 1 mile = 1.609 344 kilometers]

Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers
0		100	160.9344	200	321.8688	300	482.8032	400	643.7376	500	804.6720	600	965.6064	700	1126.5408	800	1287.4752	900	1448.4096
1	1.6093	101	162.5437	201	323.4781	301	484.4125	401	645.3469	501	806.2813	601	967.2157	701	1128.1501	801	1289.0845	901	1450.0189
2	3.2187	102	164.1531	202	325.0875	302	486.0219	402	646.9563	502	807.8907	602	968.8251	702	1129.7595	802	1290.6939	902	1451.6283
3	4.8280	103	165.7624	203	326.6968	303	487.6312	403	648.5656	503	809.5000	603	970.4344	703	1131.3688	803	1292.3032	903	1453.2376
4	6.4374	104	167.3718	204	328.3062	304	489.2406	404	650.1750	504	811.1094	604	972.0438	704	1132.9782	804	1293.9126	904	1454.8470
5	8.0467	105	168.9811	205	329.9155	305	490.8499	405	651.7843	505	812.7187	605	973.6531	705	1134.5875	805	1295.5219	905	1456.4563
6	9.6561	106	170.5905	206	331.5249	306	492.4593	406	653.3937	506	814.3281	606	975.2625	706	1136.1969	806	1297.1313	906	1458.0657
7	11.2654	107	172.1998	207	333.1342	307	494.0686	407	655.0030	507	815.9374	607	976.8718	707	1137.8062	807	1298.7406	907	1459.6750
8	12.8748	108	173.8092	208	334.7436	308	495.6780	408	656.6124	508	817.5468	608	978.4812	708	1139.4156	808	1300.3500	908	1461.2844
9	14.4841	109	175.4185	209	336.3529	309	497.2873	409	658.2217	509	819.1561	609	980.0905	709	1141.0249	809	1301.9593	909	1462.8937
10	16.0934	110	177.0278	210	337.9622	310	498.8966	410	659.8310	510	820.7654	610	981.6998	710	1142.6342	810	1303.5686	910	1464.5030
11	17.7028	111	178.6372	211	339.5716	311	500.5060	411	661.4404	511	822.3748	611	983.3092	711	1144.2436	811	1305.1780	911	1466.1124
12	19.3121	112	180.2465	212	341.1809	312	502.1153	412	663.0497	512	823.9841	612	984.9185	712	1145.8529	812	1306.7873	912	1467.7217
13	20.9215	113	181.8559	213	342.7903	313	503.7247	413	664.6591	513	825.5935	613	986.5279	713	1147.4623	813	1308.3967	913	1469.3311
14	22.5308	114	183.4652	214	344.3996	314	505.3340	414	666.2684	514	827.2028	614	988.1372	714	1149.0716	814	1310.0060	914	1470.9404
15	24.1402	115	185.0746	215	346.0090	315	506.9434	415	667.8778	515	828.8122	615	989.7466	715	1150.6810	815	1311.6154	915	1472.5498
16	25.7495	116	186.6839	216	347.6183	316	508.5527	416	669.4871	516	830.4215	616	991.3559	716	1152.2903	816	1313.2247	916	1474.1591
17	27.3588	117	188.2932	217	349.2276	317	510.1620	417	671.0964	517	832.0308	617	992.9652	717	1153.8996	817	1314.8340	917	1475.7684
18	28.9682	118	189.9026	218	350.8370	318	511.7714	418	672.7058	518	833.6402	618	994.5746	718	1155.5090	818	1316.4434	918	1477.3778
19	30.5775	119	191.5119	219	352.4463	319	513.3807	419	674.3151	519	835.2495	619	996.1839	719	1157.1183	819	1318.0527	919	1478.9871
20	32.1869	120	193.1213	220	354.0557	320	514.9901	420	675.9245	520	836.8589	620	997.7933	720	1158.7277	820	1319.6621	920	1480.5965
21	33.7962	121	194.7306	221	355.6650	321	516.5994	421	677.5338	521	838.4682	621	999.4026	721	1160.3370	821	1321.2714	921	1482.2058
22	35.4056	122	196.3400	222	357.2744	322	518.2088	422	679.1432	522	840.0776	622	1001.0120	722	1161.9464	822	1322.8808	922	1483.8152
23	37.0149	123	197.9493	223	358.8837	323	519.8181	423	680.7525	523	841.6869	623	1002.6213	723	1163.5557	823	1324.4901	923	1485.4245
24	38.6243	124	199.5587	224	360.4931	324	521.4275	424	682.3619	524	843.2963	624	1004.2307	724	1165.1651	824	1326.0995	924	1487.0339
25	40.2336	125	201.1680	225	362.1024	325	523.0368	425	683.9712	525	844.9056	625	1005.8400	725	1166.7744	825	1327.7088	925	1488.6432
26	41.8429	126	202.7773	226	363.7117	326	524.6461	426	685.5805	526	846.5149	626	1007.4493	726	1168.3837	826	1329.3181	926	1490.2525
27	43.4523	127	204.3867	227	365.3211	327	526.2555	427	687.1899	527	848.1243	627	1009.0587	727	1169.9931	827	1330.9275	927	1491.8619
28	45.0616	128	205.9960	228	366.9304	328	527.8648	428	688.7992	528	849.7336	628	1010.6680	728	1171.6024	828	1332.5368	928	1493.4712
29	46.6710	129	207.6054	229	368.5398	329	529.4742	429	690.4086	529	851.3430	629	1012.2774	729	1173.2118	829	1334.1462	929	1495.0806
30	48.2803	130	209.2147	230	370.1491	330	531.0835	430	692.0179	530	852.9523	630	1013.8867	730	1174.8211	830	1335.7555	930	1496.6899
31	49.8897	131	210.8241	231	371.7585	331	532.6929	431	693.6273	531	854.5617	631	1015.4961	731	1176.4305	831	1337.3649	931	1498.2993
32	51.4990	132	212.4334	232	373.3678	332	534.3022	432	695.2366	532	856.1710	632	1017.1054	732	1178.0398	832	1338.9742	932	1499.9086
33	53.1084	133	214.0428	233	374.9772	333	535.9116	433	696.8460	533	857.7804	633	1018.7148	733	1179.6492	833	1340.5836	933	1501.5180
34	54.7177	134	215.6521	234	376.5865	334	537.5209	434	698.4553	534	859.3897	634	1020.3241	734	1181.2585	834	1342.1929	934	1503.1273
35	56.3270	135	217.2614	235	378.1958	335	539.1302	435	700.0646	535	860.9990	635	1021.9334	735	1182.8678	835	1343.8022	935	1504.7366
36	57.9364	136	218.8708	236	379.8052	336	540.7396	436	701.6740	536	862.6084	636	1023.5428	736	1184.4772	836	1345.4116	936	1506.3460
37	59.5457	137	220.4801	237	381.4145	337	542.3489	437	703.2833	537	864.2177	637	1025.1521	737	1186.0865	837	1347.0209	937	1507.9553
38	61.1551	138	222.0895	238	383.0239	338	543.9583	438	704.8927	538	865.8271	638	1026.7615	738	1187.6959	838	1348.6303	938	1509.5647
39	62.7644	139	223.6988	239	384.6332	339	545.5676	439	706.5020	539	867.4364	639	1028.3708	739	1189.3052	839	1350.2396	939	1511.1740
40	64.3738	140	225.3082	240	386.2426	340	547.1770	440	708.1114	540	869.0458	640	1029.9802	740	1190.9146	840	1351.8490	940	1512.7834
41	65.9831	141	226.9175	241	387.8519	341	548.7863	441	709.7207	541	870.6551	641	1031.5895	741	1192.5239	841	1353.4583	941	1514.3927
42	67.5924	142	228.5268	242	389.4612	342	550.3956	442	711.3300	542	872.2644	642	1033.1988	742	1194.1332	842	1355.0676	942	1516.0020
43	69.2018	143	230.1362	243	391.0706	343	552.0050	443	712.9394	543	873.8738	643	1034.8082	743	1195.7426	843	1356.6770	943	1517.6114
44	70.8111	144	231.7455	244	392.6799	344	553.6143	444	714.5487	544	875.4831	644	1036.4175	744	1197.3519	844	1358.2863	944	1519.2207
45	72.4205	145	233.3549	245	394.2893	345	555.2237	445	716.1581	545	877.0925	645	1038.0269	745	1198.9613	845	1359.8957	945	1520.8301
46	74.0298	146	234.9642	246	395.8986	346	556.8330	446	717.7674	546	878.7018	646	1039.6362	746	1200.5706	846	1361.5050	946	1522.4394
47	75.6392	147	236.5736	247	397.5080	347	558.4424	447	719.3768	547	880.3112	647	1041.2456	747	1202.1800	847	1363.1144	947	1524.0488
48	77.2485	148	238.1829	248	399.1173	348	560.0517	448	720.9861	548	881.9205	648	1042.8549	748	1203.7893	848	1364.7237	948	1525.6581
49	78.8579	149	239.7923	249	400.7267	349	561.6611	449	722.5955	549	883.5299	649	1044.4643	749	1205.3987	849	1366.3331	949	1527.2675

50	80.4672	150	241.4016	250	402.3360	350	563.2704	450	724.2048	550	885.1392	650	1046.0736	750	1207.0080	850	1367.9424	950	1528.8768
51	82.0765	151	243.0109	251	403.9453	351	564.8797	451	725.8141	551	886.7485	651	1047.6829	751	1208.6173	851	1369.5517	951	1530.4861
52	83.6859	152	244.6203	252	405.5547	352	566.4891	452	727.4235	552	888.3579	652	1049.2923	752	1210.2267	852	1371.1611	952	1532.0955
53	85.2952	153	246.2296	253	407.1640	353	568.0984	453	729.0328	553	889.9672	653	1050.9016	753	1211.8360	853	1372.7704	953	1533.7048
54	86.9046	154	247.8390	254	408.7734	354	569.7078	454	730.6422	554	891.5766	654	1052.5110	754	1213.4454	854	1374.3798	954	1535.3142
55	88.5139	155	249.4483	255	410.3827	355	571.3171	455	732.2515	555	893.1859	655	1054.1203	755	1215.0547	855	1375.9891	955	1536.9235
56	90.1233	156	251.0577	256	411.9921	356	572.9265	456	733.8609	556	894.7953	656	1055.7297	756	1216.6641	856	1377.5985	956	1538.5329
57	91.7326	157	252.6670	257	413.6014	357	574.5358	457	735.4702	557	896.4046	657	1057.3390	757	1218.2734	857	1379.2078	957	1540.1422
58	93.3420	158	254.2764	258	415.2108	358	576.1452	458	737.0796	558	898.0140	658	1058.9484	758	1219.8828	858	1380.8172	958	1541.7516
59	94.9513	159	255.8857	259	416.8201	359	577.7545	459	738.6889	559	899.6233	659	1060.5577	759	1221.4921	859	1382.4265	959	1543.3609
60	96.5606	160	257.4950	260	418.4294	360	579.3638	460	740.2982	560	901.2326	660	1062.1670	760	1223.1014	860	1384.0358	960	1544.9702
61	98.1700	161	259.1044	261	420.0388	361	580.9732	461	741.9076	561	902.8420	661	1063.7764	761	1224.7108	861	1385.6452	961	1546.5796
62	99.7793	162	260.7137	262	421.6481	362	582.5825	462	743.5169	562	904.4513	662	1065.3857	762	1226.3201	862	1387.2545	962	1548.1889
63	101.3887	163	262.3231	263	423.2575	363	584.1919	463	745.1263	563	906.0607	663	1066.9951	763	1227.9295	863	1388.8639	963	1549.7983
64	102.9980	164	263.9324	264	424.8668	364	585.8012	464	746.7356	564	907.6700	664	1068.6044	764	1229.5388	864	1390.4732	964	1551.4076
65	104.6074	165	265.5418	265	426.4762	365	587.4106	465	748.3450	565	909.2794	665	1070.2138	765	1231.1482	865	1392.0826	965	1553.0170
66	106.2167	166	267.1511	266	428.0855	366	589.0199	466	749.9543	566	910.8887	666	1071.8231	766	1232.7575	866	1393.6919	966	1554.6263
67	107.8260	167	268.7604	267	429.6948	367	590.6292	467	751.5636	567	912.4980	667	1073.4324	767	1234.3668	867	1395.3012	967	1556.2356
68	109.4354	168	270.3698	268	431.3042	368	592.2386	468	753.1730	568	914.1074	668	1075.0418	768	1235.9762	868	1396.9106	968	1557.8450
69	111.0447	169	271.9791	269	432.9135	369	593.8479	469	754.7823	569	915.7167	669	1076.6511	769	1237.5855	869	1398.5199	969	1559.4543
70	112.6541	170	273.5885	270	434.5229	370	595.4573	470	756.3917	570	917.3261	670	1078.2605	770	1239.1949	870	1400.1293	970	1561.0637
71	114.2634	171	275.1978	271	436.1322	371	597.0666	471	758.0010	571	918.9354	671	1079.8698	771	1240.8042	871	1401.7386	971	1562.6730
72	115.8728	172	276.8072	272	437.7416	372	598.6760	472	759.6104	572	920.5448	672	1081.4792	772	1242.4136	872	1403.3480	972	1564.2824
73	117.4821	173	278.4165	273	439.3509	373	600.2853	473	761.2197	573	922.1541	673	1083.0885	773	1244.0229	873	1404.9573	973	1565.8917
74	119.0915	174	280.0259	274	440.9603	374	601.8947	474	762.8291	574	923.7635	674	1084.6979	774	1245.6323	874	1406.5667	974	1567.5011
75	120.7008	175	281.6352	275	442.5696	375	603.5040	475	764.4384	575	925.3728	675	1086.3072	775	1247.2416	875	1408.1760	975	1569.1104
76	122.3101	176	283.2445	276	444.1789	376	605.1133	476	766.0477	576	926.9821	676	1087.9165	776	1248.8509	876	1409.7853	976	1570.7197
77	123.9195	177	284.8539	277	445.7883	377	606.7227	477	767.6571	577	928.5915	677	1089.5259	777	1250.4603	877	1411.3947	977	1572.3291
78	125.5288	178	286.4632	278	447.3976	378	608.3320	478	769.2664	578	930.2008	678	1091.1352	778	1252.0696	878	1413.0040	978	1573.9384
79	127.1382	179	288.0726	279	449.0070	379	609.9414	479	770.8758	579	931.8102	679	1092.7446	779	1253.6790	879	1414.6134	979	1575.5478
80	128.7475	180	289.6819	280	450.6163	380	611.5507	480	772.4851	580	933.4195	680	1094.3539	780	1255.2883	880	1416.2227	980	1577.1571
81	130.3569	181	291.2913	281	452.2257	381	613.1601	481	774.0945	581	935.0289	681	1095.9633	781	1256.8977	881	1417.8321	981	1578.7665
82	131.9662	182	292.9006	282	453.8350	382	614.7694	482	775.7038	582	936.6382	682	1097.5726	782	1258.5070	882	1419.4414	982	1580.3758
83	133.5756	183	294.5100	283	455.4444	383	616.3788	483	777.3132	583	938.2476	683	1099.1820	783	1260.1164	883	1421.0508	983	1581.9852
84	135.1849	184	296.1193	284	457.0537	384	617.9881	484	778.9225	584	939.8569	684	1100.7913	784	1261.7257	884	1422.6601	984	1583.5945
85	136.7942	185	297.7286	285	458.6630	385	619.5974	485	780.5318	585	941.4662	685	1102.4006	785	1263.3350	885	1424.2694	985	1585.2038
86	138.4036	186	299.3380	286	460.2724	386	621.2068	486	782.1412	586	943.0756	686	1104.0100	786	1264.9444	886	1425.8788	986	1586.8132
87	140.0129	187	300.9473	287	461.8817	387	622.8161	487	783.7505	587	944.6849	687	1105.6193	787	1266.5537	887	1427.4881	987	1588.4225
88	141.6223	188	302.5567	288	463.4911	388	624.4255	488	785.3599	588	946.2943	688	1107.2287	788	1268.1631	888	1429.0975	988	1590.0319
89	143.2316	189	304.1660	289	465.1004	389	626.0348	489	786.9692	589	947.9036	689	1108.8380	789	1269.7724	889	1430.7068	989	1591.6412
90	144.8410	190	305.7754	290	466.7098	390	627.6442	490	788.5786	590	949.5130	690	1110.4474	790	1271.3818	890	1432.3162	990	1593.2506
91	146.4503	191	307.3847	291	468.3191	391	629.2535	491	790.1879	591	951.1223	691	1112.0567	791	1272.9911	891	1433.9255	991	1594.8599
92	148.0596	192	308.9940	292	469.9284	392	630.8628	492	791.7972	592	952.7316	692	1113.6660	792	1274.6004	892	1435.5348	992	1596.4692
93	149.6690	193	310.6034	293	471.5378	393	632.4722	493	793.4066	593	954.3410	693	1115.2754	793	1276.2098	893	1437.1442	993	1598.0786
94	151.2783	194	312.2127	294	473.1471	394	634.0815	494	795.0159	594	955.9503	694	1116.8847	794	1277.8191	894	1438.7535	994	1599.6879
95	152.8877	195	313.8221	295	474.7565	395	635.6909	495	796.6253	595	957.5597	695	1118.4941	795	1279.4285	895	1440.3629	995	1601.2973
96	154.4970	196	315.4314	296	476.3658	396	637.3002	496	798.2346	596	959.1690	696	1120.1034	796	1281.0378	896	1441.9722	996	1602.9066
97	156.1064	197	317.0408	297	477.9752	397	638.9096	497	799.8440	597	960.7784	697	1121.7128	797	1282.6472	897	1443.5816	997	1604.5160
98	157.7157	198	318.6501	298	479.5845	398	640.5189	498	801.4533	598	962.3877	698	1123.3221	798	1284.2565	898	1445.1909	998	1606.1253
99	159.3251	199	320.2595	299	481.1939	399	642.1283	499	803.0627	599	963.9971	699	1124.9315	799	1285.8659	899	1446.8003	999	1607.7347

9.6. LENGTH—KILOMETERS TO MILES

[Reduction Factor: 1 kilometer = 0.621 371 1922 mile]

Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles	Kilometers	Miles
0		100	62.13712	200	124.27424	300	186.41136	400	248.54848	500	310.68560	600	372.82272	700	434.95983	800	497.09695	900	559.23407
1	0.62137	101	62.75849	201	124.89561	301	187.03273	401	249.16985	501	311.30697	601	373.44409	701	435.58121	801	497.71832	901	559.85544
2	1.24274	102	63.37986	202	125.51698	302	187.65410	402	249.79122	502	311.92834	602	374.06546	702	436.20258	802	498.33970	902	560.47682
3	1.86411	103	64.00123	203	126.13835	303	188.27547	403	250.41259	503	312.54971	603	374.68683	703	436.82395	803	498.96107	903	561.09819
4	2.48548	104	64.62260	204	126.75972	304	188.89684	404	251.03396	504	313.17108	604	375.30820	704	437.44532	804	499.58244	904	561.71956
5	3.10686	105	65.24398	205	127.38109	305	189.51821	405	251.65533	505	313.79245	605	375.92957	705	438.06669	805	500.20381	905	562.34093
6	3.72823	106	65.86535	206	128.00247	306	190.13958	406	252.27670	506	314.41382	606	376.55094	706	438.68806	806	500.82518	906	562.96230
7	4.34960	107	66.48672	207	128.62384	307	190.76096	407	252.89808	507	315.03519	607	377.17231	707	439.30943	807	501.44655	907	563.58367
8	4.97097	108	67.10809	208	129.24521	308	191.38233	408	253.51945	508	315.65657	608	377.79368	708	439.93080	808	502.06792	908	564.20504
9	5.59234	109	67.72946	209	129.86658	309	192.00370	409	254.14082	509	316.27794	609	378.41506	709	440.55218	809	502.68929	909	564.82641
10	6.21371	110	68.35083	210	130.48795	310	192.62507	410	254.76219	510	316.89931	610	379.03643	710	441.17355	810	503.31067	910	565.44778
11	6.83508	111	68.97220	211	131.10932	311	193.24644	411	255.38356	511	317.52068	611	379.65780	711	441.79492	811	503.93204	911	566.06916
12	7.45645	112	69.59357	212	131.73069	312	193.86781	412	256.00493	512	318.14205	612	380.27917	712	442.41629	812	504.55341	912	566.69053
13	8.07783	113	70.21494	213	132.35206	313	194.48918	413	256.62630	513	318.76342	613	380.90054	713	443.03766	813	505.17478	913	567.31190
14	8.69920	114	70.83632	214	132.97344	314	195.11055	414	257.24767	514	319.38479	614	381.52191	714	443.65903	814	505.79615	914	567.93327
15	9.32057	115	71.45769	215	133.59481	315	195.73193	415	257.86904	515	320.00616	615	382.14328	715	444.28040	815	506.41752	915	568.55464
16	9.94194	116	72.07906	216	134.21618	316	196.35330	416	258.49042	516	320.62754	616	382.76465	716	444.90177	816	507.03889	916	569.17601
17	10.56331	117	72.70043	217	134.83755	317	196.97467	417	259.11179	517	321.24891	617	383.38603	717	445.52314	817	507.66026	917	569.79738
18	11.18468	118	73.32180	218	135.45892	318	197.59604	418	259.73316	518	321.87028	618	384.00740	718	446.14452	818	508.28164	918	570.41875
19	11.80605	119	73.94317	219	136.08029	319	198.21741	419	260.35453	519	322.49165	619	384.62877	719	446.76589	819	508.90301	919	571.04013
20	12.42742	120	74.56454	220	136.70166	320	198.83878	420	260.97590	520	323.11302	620	385.25014	720	447.38726	820	509.52438	920	571.66150
21	13.04880	121	75.18591	221	137.32303	321	199.46015	421	261.59727	521	323.73439	621	385.87151	721	448.00863	821	510.14575	921	572.28287
22	13.67017	122	75.80729	222	137.94440	322	200.08152	422	262.21864	522	324.35576	622	386.49288	722	448.63000	822	510.76712	922	572.90424
23	14.29154	123	76.42866	223	138.56578	323	200.70290	423	262.84001	523	324.97713	623	387.11425	723	449.25137	823	511.38849	923	573.52561
24	14.91291	124	77.05003	224	139.18715	324	201.32427	424	263.46139	524	325.59850	624	387.73562	724	449.87274	824	512.00986	924	574.14698
25	15.53428	125	77.67140	225	139.80852	325	201.94564	425	264.08276	525	326.21988	625	388.35700	725	450.49411	825	512.63123	925	574.76835
26	16.15565	126	78.29277	226	140.42989	326	202.56701	426	264.70413	526	326.84125	626	388.97837	726	451.11549	826	513.25260	926	575.38972
27	16.77702	127	78.91414	227	141.05126	327	203.18838	427	265.32550	527	327.46262	627	389.59974	727	451.73686	827	513.87398	927	576.01110
28	17.39839	128	79.53551	228	141.67263	328	203.80975	428	265.94687	528	328.08399	628	390.22111	728	452.35823	828	514.49535	928	576.63247
29	18.01976	129	80.15688	229	142.29400	329	204.43112	429	266.56824	529	328.70536	629	390.84248	729	452.97960	829	515.11672	929	577.25384
30	18.64114	130	80.77825	230	142.91537	330	205.05249	430	267.18961	530	329.32673	630	391.46385	730	453.60097	830	515.73809	930	577.87521
31	19.26251	131	81.39963	231	143.53675	331	205.67386	431	267.81098	531	329.94810	631	392.08522	731	454.22234	831	516.35946	931	578.49658
32	19.88388	132	82.02100	232	144.15812	332	206.29524	432	268.43236	532	330.56947	632	392.70659	732	454.84371	832	516.98083	932	579.11795
33	20.50525	133	82.64237	233	144.77949	333	206.91661	433	269.05373	533	331.19085	633	393.32796	733	455.46508	833	517.60220	933	579.73932
34	21.12662	134	83.26374	234	145.40086	334	207.53798	434	269.67510	534	331.81222	634	393.94934	734	456.08646	834	518.22357	934	580.36069
35	21.74799	135	83.88511	235	146.02223	335	208.15935	435	270.29647	535	332.43359	635	394.57071	735	456.70783	835	518.84495	935	580.98206
36	22.36936	136	84.50648	236	146.64360	336	208.78072	436	270.91784	536	333.05496	636	395.19208	736	457.32920	836	519.46632	936	581.60344
37	22.99073	137	85.12785	237	147.26497	337	209.40209	437	271.53921	537	333.67633	637	395.81345	737	457.95057	837	520.08769	937	582.22481
38	23.61211	138	85.74922	238	147.88634	338	210.02346	438	272.16058	538	334.29770	638	396.43482	738	458.57194	838	520.70906	938	582.84618
39	24.23348	139	86.37060	239	148.50771	339	210.64483	439	272.78195	539	334.91907	639	397.05619	739	459.19331	839	521.33043	939	583.46755
40	24.85485	140	86.99197	240	149.12909	340	211.26621	440	273.40332	540	335.54044	640	397.67756	740	459.81468	840	521.95180	940	584.08892
41	25.47622	141	87.61334	241	149.75046	341	211.88758	441	274.02470	541	336.16181	641	398.29893	741	460.43605	841	522.57317	941	584.71029
42	26.09759	142	88.23471	242	150.37183	342	212.50895	442	274.64607	542	336.78319	642	398.92031	742	461.05742	842	523.19454	942	585.33166
43	26.71896	143	88.85608	243	150.99320	343	213.13032	443	275.26744	543	337.40456	643	399.54168	743	461.67880	843	523.81592	943	585.95303
44	27.34033	144	89.47745	244	151.61457	344	213.75169	444	275.88881	544	338.02593	644	400.16305	744	462.30017	844	524.43729	944	586.57441
45	27.96170	145	90.09882	245	152.23594	345	214.37306	445	276.51018	545	338.64730	645	400.78442	745	462.92154	845	525.05866	945	587.19578
46	28.58307	146	90.72019	246	152.85731	346	214.99443	446	277.13155	546	339.26867	646	401.40579	746	463.54291	846	525.68003	946	587.81715
47	29.20445	147	91.34157	247	153.47868	347	215.61580	447	277.75292	547	339.89004	647	402.02716	747	464.16428	847	526.30140	947	588.43852
48	29.82582	148	91.96294	248	154.10006	348	216.23717	448	278.37429	548	340.51141	648	402.64853	748	464.78565	848	526.92277	948	589.05989
49	30.44719	149	92.58431	249	154.72143	349	216.85855	449	278.99567	549	341.13278	649	403.26990	749	465.40702	849	527.54414	949	589.68126

50	31.06856	150	93.20568	250	155.34280	350	217.47992	450	279.61704	550	341.75416	650	403.89127	750	466.02839	850	528.16551	950	590.30263
51	31.68993	151	93.82705	251	155.96417	351	218.10129	451	280.23841	551	342.37553	651	404.51265	751	466.64977	851	528.78688	951	590.92400
52	32.31130	152	94.44842	252	156.58554	352	218.72266	452	280.85978	552	342.99690	652	405.13402	752	467.27114	852	529.40826	952	591.54537
53	32.93267	153	95.06979	253	157.20691	353	219.34403	453	281.48115	553	343.61827	653	405.75539	753	467.89251	853	530.02963	953	592.16675
54	33.55404	154	95.69116	254	157.82828	354	219.96540	454	282.10252	554	344.23964	654	406.37676	754	468.51388	854	530.65100	954	592.78812
55	34.17542	155	96.31253	255	158.44965	355	220.58677	455	282.72389	555	344.86101	655	406.99813	755	469.13525	855	531.27237	955	593.40949
56	34.79679	156	96.93391	256	159.07103	356	221.20814	456	283.34526	556	345.48238	656	407.61950	756	469.75662	856	531.89374	956	594.03086
57	35.41816	157	97.55528	257	159.69240	357	221.82952	457	283.96663	557	346.10375	657	408.24087	757	470.37799	857	532.51511	957	594.65223
58	36.03953	158	98.17665	258	160.31377	358	222.45089	458	284.58801	558	346.72513	658	408.86224	758	470.99936	858	533.13648	958	595.27360
59	36.66090	159	98.79802	259	160.93514	359	223.07226	459	285.20938	559	347.34650	659	409.48362	759	471.62073	859	533.75785	959	595.89497
60	37.28227	160	99.41939	260	161.55651	360	223.69363	460	285.83075	560	347.96787	660	410.10499	760	472.24211	860	534.37923	960	596.51634
61	37.90364	161	100.04076	261	162.17788	361	224.31500	461	286.45212	561	348.58924	661	410.72636	761	472.86348	861	535.00060	961	597.13772
62	38.52501	162	100.66213	262	162.79925	362	224.93637	462	287.07349	562	349.21061	662	411.34773	762	473.48485	862	535.62197	962	597.75909
63	39.14639	163	101.28350	263	163.42062	363	225.55774	463	287.69486	563	349.83198	663	411.96910	763	474.10622	863	536.24334	963	598.38046
64	39.76776	164	101.90488	264	164.04199	364	226.17911	464	288.31623	564	350.45335	664	412.59047	764	474.72759	864	536.86471	964	599.00183
65	40.38913	165	102.52625	265	164.66337	365	226.80049	465	288.93760	565	351.07472	665	413.21184	765	475.34896	865	537.48608	965	599.62320
66	41.01050	166	103.14762	266	165.28474	366	227.42186	466	289.55898	566	351.69609	666	413.83321	766	475.97033	866	538.10745	966	600.24457
67	41.63187	167	103.76899	267	165.90611	367	228.04323	467	290.18035	567	352.31747	667	414.45459	767	476.59170	867	538.72882	967	600.86594
68	42.25324	168	104.39036	268	166.52748	368	228.66460	468	290.80172	568	352.93884	668	415.07596	768	477.21308	868	539.35019	968	601.48731
69	42.87461	169	105.01173	269	167.14885	369	229.28597	469	291.42309	569	353.56021	669	415.69733	769	477.83445	869	539.97157	969	602.10869
70	43.49598	170	105.63310	270	167.77022	370	229.90734	470	292.04446	570	354.18158	670	416.31870	770	478.45582	870	540.59294	970	602.73006
71	44.11735	171	106.25447	271	168.39159	371	230.52871	471	292.66583	571	354.80295	671	416.94007	771	479.07719	871	541.21431	971	603.35143
72	44.73873	172	106.87585	272	169.01296	372	231.15008	472	293.28720	572	355.42432	672	417.56144	772	479.69856	872	541.83568	972	603.97280
73	45.36010	173	107.49722	273	169.63434	373	231.77145	473	293.90857	573	356.04569	673	418.18281	773	480.31993	873	542.45705	973	604.59417
74	45.98147	174	108.11859	274	170.25571	374	232.39283	474	294.52995	574	356.66706	674	418.80418	774	480.94130	874	543.07842	974	605.21554
75	46.60284	175	108.73996	275	170.87708	375	233.01420	475	295.15132	575	357.28844	675	419.42555	775	481.56267	875	543.69979	975	605.83691
76	47.22421	176	109.36133	276	171.49845	376	233.63557	476	295.77269	576	357.90981	676	420.04693	776	482.18405	876	544.32116	976	606.45828
77	47.84558	177	109.98270	277	172.11982	377	234.25694	477	296.39406	577	358.53118	677	420.66830	777	482.80542	877	544.94254	977	607.07965
78	48.46695	178	110.60407	278	172.74119	378	234.87831	478	297.01543	578	359.15255	678	421.28967	778	483.42679	878	545.56391	978	607.70103
79	49.08832	179	111.22544	279	173.36256	379	235.49968	479	297.63680	579	359.77392	679	421.91104	779	484.04816	879	546.18528	979	608.32240
80	49.70970	180	111.84681	280	173.98393	380	236.12105	480	298.25817	580	360.39529	680	422.53241	780	484.66953	880	546.80665	980	608.94377
81	50.33107	181	112.46819	281	174.60531	381	236.74242	481	298.87954	581	361.01666	681	423.15378	781	485.29090	881	547.42802	981	609.56514
82	50.95244	182	113.08956	282	175.22668	382	237.36380	482	299.50091	582	361.63803	682	423.77515	782	485.91227	882	548.04939	982	610.18651
83	51.57381	183	113.71093	283	175.84805	383	237.98517	483	300.12229	583	362.25941	683	424.39652	783	486.53364	883	548.67076	983	610.80788
84	52.19518	184	114.33230	284	176.46942	384	238.60654	484	300.74366	584	362.88078	684	425.01790	784	487.15501	884	549.29213	984	611.42925
85	52.81655	185	114.95367	285	177.09079	385	239.22791	485	301.36503	585	363.50215	685	425.63927	785	487.77639	885	549.91351	985	612.05062
86	53.43792	186	115.57504	286	177.71216	386	239.84928	486	301.98640	586	364.12352	686	426.26064	786	488.39776	886	550.53488	986	612.67200
87	54.05929	187	116.19641	287	178.33353	387	240.47065	487	302.60777	587	364.74489	687	426.88201	787	489.01913	887	551.15625	987	613.29337
88	54.68066	188	116.81778	288	178.95490	388	241.09202	488	303.22914	588	365.36626	688	427.50338	788	489.64050	888	551.77762	988	613.91474
89	55.30204	189	117.43916	289	179.57627	389	241.71339	489	303.85051	589	365.98763	689	428.12475	789	490.26187	889	552.39899	989	614.53611
90	55.92341	190	118.06053	290	180.19765	390	242.33476	490	304.47188	590	366.60900	690	428.74612	790	490.88324	890	553.02036	990	615.15748
91	56.54478	191	118.68190	291	180.81902	391	242.95614	491	305.09326	591	367.23037	691	429.36749	791	491.50461	891	553.64173	991	615.77885
92	57.16615	192	119.30327	292	181.44039	392	243.57751	492	305.71463	592	367.85175	692	429.98887	792	492.12598	892	554.26310	992	616.40022
93	57.78752	193	119.92464	293	182.06176	393	244.19888	493	306.33600	593	368.47312	693	430.61024	793	492.74736	893	554.88447	993	617.02159
94	58.40889	194	120.54601	294	182.68313	394	244.82025	494	306.95737	594	369.09449	694	431.23161	794	493.36873	894	555.50585	994	617.64297
95	59.03026	195	121.16738	295	183.30450	395	245.44162	495	307.57874	595	369.71586	695	431.85298	795	493.99010	895	556.12722	995	618.26434
96	59.65163	196	121.78875	296	183.92587	396	246.06299	496	308.20011	596	370.33723	696	432.47435	796	494.61147	896	556.74859	996	618.88571
97	60.27301	197	122.41012	297	184.54724	397	246.68436	497	308.82148	597	370.95860	697	433.09572	797	495.23284	897	557.36996	997	619.50708
98	60.89438	198	123.03150	298	185.16862	398	247.30573	498	309.44285	598	371.57997	698	433.71709	798	495.85421	898	557.99133	998	620.12845
99	61.51575	199	123.65287	299	185.78999	399	247.92711	499	310.06422	599	372.20134	699	434.33846	799	496.47558	899	558.61270	999	620.74982

9.7. AREA—ACRES TO HECTARES

[Reduction Factor: 1 acre = 0.404 685 642 24 hectare]

Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares
0		100	40.46856	200	80.93713	300	121.40569	400	161.87426	500	202.34282	600	242.81139	700	283.27995	800	323.74851	900	364.21708
1	0.40469	101	40.87325	201	81.34181	301	121.81038	401	162.27894	501	202.74751	601	243.21607	701	283.68464	801	324.15320	901	364.62176
2	.80937	102	41.27794	202	81.74650	302	122.21506	402	162.68363	502	203.15219	602	243.62076	702	284.08932	802	324.55789	902	365.02645
3	1.21406	103	41.68262	203	82.15119	303	122.61975	403	163.08831	503	203.55688	603	244.02544	703	284.49401	803	324.96257	903	365.43113
4	1.61874	104	42.08731	204	82.55587	304	123.02444	404	163.49300	504	203.96156	604	244.43013	704	284.89869	804	325.36726	904	365.83582
5	2.02343	105	42.49199	205	82.96056	305	123.42912	405	163.89769	505	204.36625	605	244.83481	705	285.30338	805	325.77194	905	366.24051
6	2.42811	106	42.89668	206	83.36524	306	123.83381	406	164.30237	506	204.77093	606	245.23950	706	285.70806	806	326.17663	906	366.64519
7	2.83280	107	43.30136	207	83.76993	307	124.23849	407	164.70706	507	205.17562	607	245.64418	707	286.11275	807	326.58131	907	367.04988
8	3.23749	108	43.70605	208	84.17461	308	124.64318	408	165.11174	508	205.58031	608	246.04887	708	286.51743	808	326.98600	908	367.45456
9	3.64217	109	44.11074	209	84.57930	309	125.04786	409	165.51643	509	205.98499	609	246.45356	709	286.92212	809	327.39068	909	367.85925
10	4.04686	110	44.51542	210	84.98398	310	125.45255	410	165.92111	510	206.38968	610	246.85824	710	287.32681	810	327.79537	910	368.26393
11	4.45154	111	44.92011	211	85.38867	311	125.85723	411	166.32580	511	206.79436	611	247.26293	711	287.73149	811	328.20006	911	368.66862
12	4.85623	112	45.32479	212	85.79336	312	126.26192	412	166.73048	512	207.19905	612	247.66761	712	288.13618	812	328.60474	912	369.07331
13	5.26091	113	45.72948	213	86.19804	313	126.66661	413	167.13517	513	207.60373	613	248.07230	713	288.54086	813	329.00943	913	369.47799
14	5.66560	114	46.13416	214	86.60273	314	127.07129	414	167.53986	514	208.00842	614	248.47698	714	288.94555	814	329.41411	914	369.88268
15	6.07028	115	46.53885	215	87.00741	315	127.47598	415	167.94454	515	208.41311	615	248.88167	715	289.35023	815	329.81880	915	370.28736
16	6.47497	116	46.94353	216	87.41210	316	127.88066	416	168.34923	516	208.81779	616	249.28636	716	289.75492	816	330.22348	916	370.69205
17	6.87966	117	47.34822	217	87.81678	317	128.28535	417	168.75391	517	209.22248	617	249.69104	717	290.15961	817	330.62817	917	371.09673
18	7.28434	118	47.75291	218	88.22147	318	128.69003	418	169.15860	518	209.62716	618	250.09573	718	290.56429	818	331.03286	918	371.50142
19	7.68903	119	48.15759	219	88.62616	319	129.09472	419	169.56328	519	210.03185	619	250.50041	719	290.96898	819	331.43754	919	371.90611
20	8.09371	120	48.56228	220	89.03084	320	129.49941	420	169.96797	520	210.43653	620	250.90510	720	291.37366	820	331.84223	920	372.31079
21	8.49840	121	48.96696	221	89.43553	321	129.90409	421	170.37266	521	210.84122	621	251.30978	721	291.77835	821	332.24691	921	372.71548
22	8.90308	122	49.37165	222	89.84021	322	130.30878	422	170.77734	522	211.24591	622	251.71447	722	292.18303	822	332.65160	922	373.12016
23	9.30777	123	49.77633	223	90.24490	323	130.71346	423	171.18203	523	211.65059	623	252.11916	723	292.58772	823	333.05628	923	373.52485
24	9.71246	124	50.18102	224	90.64958	324	131.11815	424	171.58671	524	212.05528	624	252.52384	724	292.99240	824	333.46097	924	373.92953
25	10.11714	125	50.58571	225	91.05427	325	131.52283	425	171.99140	525	212.45996	625	252.92853	725	293.39709	825	333.86565	925	374.33422
26	10.52183	126	50.99039	226	91.45896	326	131.92752	426	172.39608	526	212.86465	626	253.33321	726	293.80178	826	334.27034	926	374.73890
27	10.92651	127	51.39508	227	91.86364	327	132.33221	427	172.80077	527	213.26933	627	253.73790	727	294.20646	827	334.67503	927	375.14359
28	11.33120	128	51.79976	228	92.26833	328	132.73689	428	173.20545	528	213.67402	628	254.14258	728	294.61115	828	335.07971	928	375.54828
29	11.73588	129	52.20445	229	92.67301	329	133.14158	429	173.61014	529	214.07870	629	254.54727	729	295.01583	829	335.48440	929	375.95296
30	12.14057	130	52.60913	230	93.07770	330	133.54626	430	174.01483	530	214.48339	630	254.95195	730	295.42052	830	335.88908	930	376.35765
31	12.54525	131	53.01382	231	93.48238	331	133.95095	431	174.41951	531	214.88808	631	255.35664	731	295.82520	831	336.29377	931	376.76233
32	12.94994	132	53.41850	232	93.88707	332	134.35563	432	174.82420	532	215.29276	632	255.76133	732	296.22989	832	336.69845	932	377.16702
33	13.35463	133	53.82319	233	94.29175	333	134.76032	433	175.22888	533	215.69745	633	256.16601	733	296.63458	833	337.10314	933	377.57170
34	13.75931	134	54.22788	234	94.69644	334	135.16500	434	175.63357	534	216.10213	634	256.57070	734	297.03926	834	337.50783	934	377.97639
35	14.16400	135	54.63256	235	95.10113	335	135.56969	435	176.03825	535	216.50682	635	256.97538	735	297.44395	835	337.91251	935	378.38108
36	14.56868	136	55.03725	236	95.50581	336	135.97438	436	176.44294	536	216.91150	636	257.38007	736	297.84863	836	338.31720	936	378.78576
37	14.97337	137	55.44193	237	95.91050	337	136.37906	437	176.84763	537	217.31619	637	257.78475	737	298.25332	837	338.72188	937	379.19045
38	15.37805	138	55.84662	238	96.31518	338	136.78375	438	177.25231	538	217.72088	638	258.18944	738	298.65800	838	339.12657	938	379.59513
39	15.78274	139	56.25130	239	96.71987	339	137.18843	439	177.65700	539	218.12556	639	258.59413	739	299.06269	839	339.53125	939	379.99982
40	16.18743	140	56.65599	240	97.12455	340	137.59312	440	178.06168	540	218.53025	640	258.99881	740	299.46738	840	339.93594	940	380.40450
41	16.59211	141	57.06068	241	97.52924	341	137.99780	441	178.46637	541	218.93493	641	259.40350	741	299.87206	841	340.34063	941	380.80919
42	16.99680	142	57.46536	242	97.93393	342	138.40249	442	178.87105	542	219.33962	642	259.80818	742	300.27675	842	340.74531	942	381.21387
43	17.40148	143	57.87005	243	98.33861	343	138.80718	443	179.27574	543	219.74430	643	260.21287	743	300.68143	843	341.15000	943	381.61856
44	17.80617	144	58.27473	244	98.74330	344	139.21186	444	179.68043	544	220.14899	644	260.61755	744	301.08612	844	341.55468	944	382.02325
45	18.21085	145	58.67942	245	99.14798	345	139.61655	445	180.08511	545	220.55368	645	261.02224	745	301.49080	845	341.95937	945	382.42793
46	18.61554	146	59.08410	246	99.55267	346	140.02123	446	180.48980	546	220.95836	646	261.42692	746	301.89549	846	342.36405	946	382.83262
47	19.02023	147	59.48879	247	99.95735	347	140.42592	447	180.89448	547	221.36305	647	261.83161	747	302.30017	847	342.76874	947	383.23730
48	19.42491	148	59.89348	248	100.36204	348	140.83060	448	181.29917	548	221.76773	648	262.23630	748	302.70486	848	343.17342	948	383.64199
49	19.82960	149	60.29816	249	100.76672	349	141.23529	449	181.70385	549	222.17242	649	262.64098	749	303.10955	849	343.57811	949	384.04667

50	20.23428	150	60.70285	250	101.17141	350	141.63997	450	182.10854	550	222.57710	650	263.04567	750	303.51423	850	343.98280	950	384.45136
51	20.63897	151	61.10753	251	101.57610	351	142.04466	451	182.51322	551	222.98179	651	263.45035	751	303.91892	851	344.38748	951	384.85605
52	21.04365	152	61.51222	252	101.98078	352	142.44935	452	182.91791	552	223.38647	652	263.85504	752	304.32360	852	344.79217	952	385.26073
53	21.44834	153	61.91690	253	102.38547	353	142.85403	453	183.32260	553	223.79116	653	264.25972	753	304.72829	853	345.19685	953	385.66542
54	21.85302	154	62.32159	254	102.79015	354	143.25872	454	183.72728	554	224.19585	654	264.66441	754	305.13297	854	345.60154	954	386.07010
55	22.25771	155	62.72627	255	103.19484	355	143.66340	455	184.13197	555	224.60053	655	265.06910	755	305.53766	855	346.00622	955	386.47479
56	22.66240	156	63.13096	256	103.59952	356	144.06809	456	184.53665	556	225.00522	656	265.47378	756	305.94235	856	346.41091	956	386.87947
57	23.06708	157	63.53565	257	104.00421	357	144.47277	457	184.94134	557	225.40990	657	265.87847	757	306.34703	857	346.81560	957	387.28416
58	23.47177	158	63.94033	258	104.40890	358	144.87746	458	185.34602	558	225.81459	658	266.28315	758	306.75172	858	347.22028	958	387.68885
59	23.87645	159	64.34502	259	104.81358	359	145.28215	459	185.75071	559	226.21927	659	266.68784	759	307.15640	859	347.62497	959	388.09353
60	24.28114	160	64.74970	260	105.21827	360	145.68683	460	186.15540	560	226.62396	660	267.09252	760	307.56109	860	348.02965	960	388.49822
61	24.68582	161	65.15439	261	105.62295	361	146.09152	461	186.56008	561	227.02865	661	267.49721	761	307.96577	861	348.43434	961	388.90290
62	25.09051	162	65.55907	262	106.02764	362	146.49620	462	186.96477	562	227.43333	662	267.90190	762	308.37046	862	348.83902	962	389.30759
63	25.49520	163	65.96376	263	106.43232	363	146.90089	463	187.36945	563	227.83802	663	268.30658	763	308.77515	863	349.24371	963	389.71227
64	25.89988	164	66.36845	264	106.83701	364	147.30557	464	187.77414	564	228.24270	664	268.71127	764	309.17983	864	349.64839	964	390.11696
65	26.30457	165	66.77313	265	107.24170	365	147.71026	465	188.17882	565	228.64739	665	269.11595	765	309.58452	865	350.05308	965	390.52164
66	26.70925	166	67.17782	266	107.64638	366	148.11495	466	188.58351	566	229.05207	666	269.52064	766	309.98920	866	350.45777	966	390.92633
67	27.11394	167	67.58250	267	108.05107	367	148.51963	467	188.98819	567	229.45676	667	269.92532	767	310.39389	867	350.86245	967	391.33102
68	27.51862	168	67.98719	268	108.45575	368	148.92432	468	189.39288	568	229.86144	668	270.33001	768	310.79857	868	351.26714	968	391.73570
69	27.92331	169	68.39187	269	108.86044	369	149.32900	469	189.79757	569	230.26613	669	270.73469	769	311.20326	869	351.67182	969	392.14039
70	28.32799	170	68.79656	270	109.26512	370	149.73369	470	190.20225	570	230.67082	670	271.13938	770	311.60794	870	352.07651	970	392.54507
71	28.73268	171	69.20124	271	109.66981	371	150.13837	471	190.60694	571	231.07550	671	271.54407	771	312.01263	871	352.48119	971	392.94976
72	29.13737	172	69.60593	272	110.07449	372	150.54306	572	191.01162	572	231.48019	672	271.94875	772	312.41732	872	352.88588	972	393.35444
73	29.54205	173	70.01062	273	110.47918	373	150.94774	473	191.41631	573	231.88487	673	272.35344	773	312.82200	873	353.29057	973	393.75913
74	29.94674	174	70.41530	274	110.88387	374	151.35243	474	191.82099	574	232.28956	674	272.75812	774	313.22669	874	353.69525	974	394.16382
75	30.35142	175	70.81999	275	111.28855	375	151.75712	475	192.22568	575	232.69424	675	273.16281	775	313.63137	875	354.09994	975	394.56850
76	30.75611	176	71.22467	276	111.69324	376	152.16180	476	192.63037	576	233.09893	676	273.56749	776	314.03606	876	354.50462	976	394.97319
77	31.16079	177	71.62936	277	112.09792	377	152.56649	477	193.03505	577	233.50362	677	273.97218	777	314.44074	877	354.90931	977	395.37787
78	31.56548	178	72.03404	278	112.50261	378	152.97117	478	193.43974	578	233.90830	678	274.37687	778	314.84543	878	355.31399	978	395.78256
79	31.97017	179	72.43873	279	112.90729	379	153.37586	479	193.84442	579	234.31299	679	274.78155	779	315.25012	879	355.71868	979	396.18724
80	32.37485	180	72.84342	280	113.31198	380	153.78054	480	194.24911	580	234.71767	680	275.18624	780	315.65480	880	356.12337	980	396.59193
81	32.77954	181	73.24810	281	113.71667	381	154.18523	481	194.65379	581	235.12236	681	275.59092	781	316.05949	881	356.52805	981	396.99662
82	33.18422	182	73.65279	282	114.12135	382	154.58992	482	195.05848	582	235.52704	682	275.99561	782	316.46417	882	356.93274	982	397.40130
83	33.58891	183	74.05747	283	114.52604	383	154.99460	483	195.46317	583	235.93173	683	276.40029	783	316.86886	883	357.33742	983	397.80599
84	33.99359	184	74.46216	284	114.93072	384	155.39929	484	195.86785	584	236.33642	684	276.80498	784	317.27354	884	357.74211	984	398.21067
85	34.39828	185	74.86684	285	115.33541	385	155.80397	485	196.27254	585	236.74110	685	277.20966	785	317.67823	885	358.14679	985	398.61536
86	34.80297	186	75.27153	286	115.74009	386	156.20866	486	196.67722	586	237.14579	686	277.61435	786	318.08291	886	358.55148	986	399.02004
87	35.20765	187	75.67622	287	116.14478	387	156.61334	487	197.08191	587	237.55047	687	278.01904	787	318.48760	887	358.95616	987	399.42473
88	35.61234	188	76.08090	288	116.54946	388	157.01803	488	197.48659	588	237.95516	688	278.42372	788	318.89229	888	359.36085	988	399.82941
89	36.01702	189	76.48559	289	116.95415	389	157.42271	489	197.89128	589	238.35984	689	278.82841	789	319.29697	889	359.76554	989	400.23410
90	36.42171	190	76.89027	290	117.35884	390	157.82740	490	198.29596	590	238.76453	690	279.23309	790	319.70166	890	360.17022	990	400.63879
91	36.82639	191	77.29496	291	117.76352	391	158.23209	491	198.70065	591	239.16921	691	279.63778	791	320.10634	891	360.57491	991	401.04347
92	37.23108	192	77.69964	292	118.16821	392	158.63677	492	199.10534	592	239.57390	692	280.04246	792	320.51103	892	360.97959	992	401.44816
93	37.63576	193	78.10433	293	118.57289	393	159.04146	493	199.51002	593	239.97859	693	280.44715	793	320.91571	893	361.38428	993	401.85284
94	38.04045	194	78.50901	294	118.97758	394	159.44614	494	199.91471	594	240.38327	694	280.85184	794	321.32040	894	361.78896	994	402.25753
95	38.44514	195	78.91370	295	119.38226	395	159.85083	495	200.31939	595	240.78796	695	281.25652	795	321.72509	895	362.19365	995	402.66221
96	38.84982	196	79.31839	296	119.78695	396	160.25551	496	200.72408	596	241.19264	696	281.66121	796	322.12977	896	362.59834	996	403.06690
97	39.25451	197	79.72307	297	120.19164	397	160.66020	497	201.12876	597	241.59733	697	282.06589	797	322.53446	897	363.00302	997	403.47159
98	39.65919	198	80.12776	298	120.59632	398	161.06489	498	201.53345	598	242.00201	698	282.47058	798	322.93914	898	363.40771	998	403.87627
99	40.06388	199	80.53244	299	121.00101	399	161.46957	499	201.93814	599	242.40670	699	282.87526	799	323.34383	899	363.81239	999	404.28096

9.8. AREA—HECTARES TO ACRES

[Reduction Factor: 1 hectare = 2.471 053 815 acres]

Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres	Hectares	Acres
0		100	247.10538	200	494.21076	300	741.31614	400	988.42153	500	1235.52691	600	1482.63229	700	1729.73767	800	1976.84305	900	2223.94843
1	2.47105	101	249.57644	201	496.68182	301	743.78720	401	990.89258	501	1237.99796	601	1485.10334	701	1732.20872	801	1979.31411	901	2226.41949
2	4.94211	102	252.04749	202	499.15287	302	746.25825	402	993.36363	502	1240.46902	602	1487.57440	702	1734.67978	802	1981.78516	902	2228.89054
3	7.41316	103	254.51854	203	501.62392	303	748.72931	403	995.83469	503	1242.94007	603	1490.04545	703	1737.15083	803	1984.25621	903	2231.36159
4	9.88422	104	256.98960	204	504.09498	304	751.20036	404	998.30574	504	1245.41112	604	1492.51650	704	1739.62189	804	1986.72727	904	2233.83265
5	12.35527	105	259.46065	205	506.56603	305	753.67141	405	1000.77680	505	1247.88218	605	1494.98756	705	1742.09294	805	1989.19832	905	2236.30370
6	14.82632	106	261.93170	206	509.03709	306	756.14247	406	1003.24785	506	1250.35323	606	1497.45861	706	1744.56399	806	1991.66937	906	2238.77476
7	17.29738	107	264.40276	207	511.50814	307	758.61352	407	1005.71890	507	1252.82428	607	1499.92967	707	1747.03505	807	1994.14043	907	2241.24581
8	19.76843	108	266.87381	208	513.97919	308	761.08458	408	1008.18996	508	1255.29534	608	1502.40072	708	1749.50610	808	1996.61148	908	2243.71686
9	22.23948	109	269.34487	209	516.45025	309	763.55563	409	1010.66101	509	1257.76639	609	1504.87177	709	1751.97715	809	1999.08254	909	2246.18792
10	24.71054	110	271.81592	210	518.92130	310	766.02668	410	1013.13206	510	1260.23745	610	1507.34283	710	1754.44821	810	2001.55359	910	2248.65897
11	27.18159	111	274.28697	211	521.39235	311	768.49774	411	1015.60312	511	1262.70850	611	1509.81388	711	1756.91926	811	2004.02464	911	2251.13003
12	29.65265	112	276.75803	212	523.86341	312	770.96879	412	1018.07417	512	1265.17955	612	1512.28493	712	1759.39032	812	2006.49570	912	2253.60108
13	32.12370	113	279.22908	213	526.33446	313	773.43984	413	1020.54523	513	1267.65061	613	1514.75599	713	1761.86137	813	2008.96675	913	2256.07213
14	34.59475	114	281.70013	214	528.80552	314	775.91090	414	1023.01628	514	1270.12166	614	1517.22704	714	1764.33242	814	2011.43781	914	2258.54319
15	37.06581	115	284.17119	215	531.27657	315	778.38195	415	1025.48733	515	1272.59271	615	1519.69810	715	1766.80348	815	2013.90886	915	2261.01424
16	39.53686	116	286.64224	216	533.74762	316	780.85301	416	1027.95839	516	1275.06377	616	1522.16915	716	1769.27453	816	2016.37991	916	2263.48529
17	42.00791	117	289.11330	217	536.21868	317	783.32406	417	1030.42944	517	1277.53482	617	1524.64020	717	1771.74559	817	2018.85097	917	2265.95635
18	44.47897	118	291.58435	218	538.68973	318	785.79511	418	1032.90049	518	1280.00588	618	1527.11126	718	1774.21664	818	2021.32202	918	2268.42740
19	46.95002	119	294.05540	219	541.16079	319	788.26617	419	1035.37155	519	1282.47693	619	1529.58231	719	1776.68769	819	2023.79307	919	2270.89846
20	49.42108	120	296.52646	220	543.63184	320	790.73722	420	1037.84260	520	1284.94798	620	1532.05337	720	1779.15875	820	2026.26413	920	2273.36951
21	51.89213	121	298.99751	221	546.10289	321	793.20827	421	1040.31366	521	1287.41904	621	1534.52442	721	1781.62980	821	2028.73518	921	2275.84056
22	54.36318	122	301.46857	222	548.57395	322	795.67933	422	1042.78471	522	1289.89009	622	1536.99547	722	1784.10085	822	2031.20624	922	2278.31162
23	56.83424	123	303.93962	223	551.04500	323	798.15038	423	1045.25576	523	1292.36115	623	1539.46653	723	1786.57191	823	2033.67729	923	2280.78267
24	59.30529	124	306.41067	224	553.51605	324	800.62144	424	1047.72682	524	1294.83220	624	1541.93758	724	1789.04296	824	2036.14834	924	2283.25373
25	61.77635	125	308.88173	225	555.98711	325	803.09249	425	1050.19787	525	1297.30325	625	1544.40863	725	1791.51402	825	2038.61940	925	2285.72478
26	64.24740	126	311.35278	226	558.45816	326	805.56354	426	1052.66893	526	1299.77431	626	1546.87969	726	1793.98507	826	2041.09045	926	2288.19583
27	66.71845	127	313.82383	227	560.92922	327	808.03460	427	1055.13998	527	1302.24536	627	1549.35074	727	1796.45612	827	2043.56151	927	2290.66689
28	69.18951	128	316.29489	228	563.40027	328	810.50565	428	1057.61103	528	1304.71641	628	1551.82180	728	1798.92718	828	2046.03256	928	2293.13794
29	71.66056	129	318.76594	229	565.87132	329	812.97671	429	1060.08209	529	1307.18747	629	1554.29285	729	1801.39823	829	2048.50361	929	2295.60899
30	74.13161	130	321.23700	230	568.34238	330	815.44776	430	1062.55314	530	1309.65852	630	1556.76390	730	1803.86928	830	2050.97467	930	2298.08005
31	76.60267	131	323.70805	231	570.81343	331	817.91881	431	1065.02419	531	1312.12958	631	1559.23496	731	1806.34034	831	2053.44572	931	2300.55110
32	79.07372	132	326.17910	232	573.28449	332	820.38987	432	1067.49525	532	1314.60063	632	1561.70601	732	1808.81139	832	2055.91677	932	2303.02216
33	81.54478	133	328.65016	233	575.75554	333	822.86092	433	1069.96630	533	1317.07168	633	1564.17706	733	1811.28245	833	2058.38783	933	2305.49321
34	84.01583	134	331.12121	234	578.22659	334	825.33197	434	1072.43736	534	1319.54274	634	1566.64812	734	1813.75350	834	2060.85888	934	2307.96426
35	86.48688	135	333.59227	235	580.69765	335	827.80303	435	1074.90841	535	1322.01379	635	1569.11917	735	1816.22455	835	2063.32994	935	2310.43532
36	88.95794	136	336.06332	236	583.16870	336	830.27408	436	1077.37946	536	1324.48484	636	1571.59023	736	1818.69561	836	2065.80099	936	2312.90637
37	91.42899	137	338.53437	237	585.63975	337	832.74514	437	1079.85052	537	1326.95590	637	1574.06128	737	1821.16666	837	2068.27204	937	2315.37742
38	93.90004	138	341.00543	238	588.11081	338	835.21619	438	1082.32157	538	1329.42695	638	1576.53233	738	1823.63772	838	2070.74310	938	2317.84848
39	96.37110	139	343.47648	239	590.58186	339	837.68724	439	1084.79262	539	1331.89801	639	1579.00339	739	1826.10877	839	2073.21415	939	2320.31953
40	98.84215	140	345.94753	240	593.05292	340	840.15830	440	1087.26368	540	1334.36906	640	1581.47444	740	1828.57982	840	2075.68520	940	2322.79059
41	101.31321	141	348.41859	241	595.52397	341	842.62935	441	1089.73473	541	1336.84011	641	1583.94550	741	1831.05088	841	2078.15626	941	2325.26164
42	103.78426	142	350.88964	242	597.99502	342	845.10040	442	1092.20579	542	1339.31117	642	1586.41655	742	1833.52193	842	2080.62731	942	2327.73269
43	106.25531	143	353.36070	243	600.46608	343	847.57146	443	1094.67684	543	1341.78222	643	1588.88760	743	1835.99298	843	2083.09837	943	2330.20375
44	108.72637	144	355.83175	244	602.93713	344	850.04251	444	1097.14789	544	1344.25328	644	1591.35866	744	1838.46404	844	2085.56942	944	2332.67480
45	111.19742	145	358.30280	245	605.40818	345	852.51357	445	1099.61895	545	1346.72433	645	1593.82971	745	1840.93509	845	2088.04047	945	2335.14586
46	113.66848	146	360.77386	246	607.87924	346	854.98462	446	1102.09000	546	1349.19538	646	1596.30076	746	1843.40615	846	2090.51153	946	2337.61691
47	116.13953	147	363.24491	247	610.35029	347	857.45567	447	1104.56106	547	1351.66644	647	1598.77182	747	1845.87720	847	2092.98258	947	2340.08796
48	118.61058	148	365.71596	248	612.82135	348	859.92673	448	1107.03211	548	1354.13749	648	1601.24287	748	1848.34825	848	2095.45364	948	2342.55902
49	121.08164	149	368.18702	249	615.29240	349	862.39778	449	1109.50316	549	1356.60854	649	1603.71393	749	1850.81931	849	2097.92469	949	2345.03007

50	123.55269	150	370.65807	250	617.76345	350	864.86884	450	1111.97422	550	1359.07960	650	1606.18498	750	1853.29036	850	2100.39574	950	2347.50112
51	126.02374	151	373.12913	251	620.23451	351	867.33989	451	1114.44527	551	1361.55065	651	1608.65603	751	1855.76142	851	2102.86680	951	2349.97218
52	128.49480	152	375.60018	252	622.70556	352	869.81094	452	1116.91632	552	1364.02171	652	1611.12709	752	1858.23247	852	2105.33785	952	2352.44323
53	130.96585	153	378.07123	253	625.17662	353	872.28200	453	1119.38738	553	1366.49276	653	1613.59814	753	1860.70352	853	2107.80890	953	2354.91429
54	133.43691	154	380.54229	254	627.64767	354	874.75305	454	1121.85843	554	1368.96381	654	1616.06920	754	1863.17458	854	2110.27996	954	2357.38534
55	135.90796	155	383.01334	255	630.11872	355	877.22410	455	1124.32949	555	1371.43487	655	1618.54025	755	1865.64563	855	2112.75101	955	2359.85639
56	138.37901	156	385.48440	256	632.58978	356	879.69516	456	1126.80054	556	1373.90592	656	1621.01130	756	1868.11668	856	2115.22207	956	2362.32745
57	140.85007	157	387.95545	257	635.06083	357	882.16621	457	1129.27159	557	1376.37697	657	1623.48236	757	1870.58774	857	2117.69312	957	2364.79850
58	143.32112	158	390.42650	258	637.53188	358	884.63727	458	1131.74265	558	1378.84803	658	1625.95341	758	1873.05879	858	2120.16417	958	2367.26955
59	145.79218	159	392.89756	259	640.00294	359	887.10832	459	1134.21370	559	1381.31908	659	1628.42446	759	1875.52985	859	2122.63523	959	2369.74061
60	148.26323	160	395.36861	260	642.47399	360	889.57937	460	1136.68475	560	1383.79014	660	1630.89552	760	1878.00090	860	2125.10628	960	2372.21166
61	150.73428	161	397.83966	261	644.94505	361	892.05043	461	1139.15581	561	1386.26119	661	1633.36657	761	1880.47195	861	2127.57733	961	2374.68272
62	153.20534	162	400.31072	262	647.41610	362	894.52148	462	1141.62686	562	1388.73224	662	1635.83763	762	1882.94301	862	2130.04839	962	2377.15377
63	155.67639	163	402.78177	263	649.88715	363	896.99253	463	1144.09792	563	1391.20330	663	1638.30868	763	1885.41406	863	2132.51944	963	2379.62482
64	158.14744	164	405.25283	264	652.35821	364	899.46359	464	1146.56897	564	1393.67435	664	1640.77973	764	1887.88511	864	2134.99050	964	2382.09588
65	160.61850	165	407.72388	265	654.82926	365	901.93464	465	1149.04002	565	1396.14541	665	1643.25079	765	1890.35617	865	2137.46155	965	2384.56693
66	163.08955	166	410.19493	266	657.30031	366	904.40570	466	1151.51108	566	1398.61646	666	1645.72184	766	1892.82722	866	2139.93260	966	2387.03799
67	165.56061	167	412.66599	267	659.77137	367	906.87675	467	1153.98213	567	1401.08751	667	1648.19289	767	1895.29828	867	2142.40366	967	2389.50904
68	168.03166	168	415.13704	268	662.24242	368	909.34780	468	1156.45319	568	1403.55857	668	1650.66395	768	1897.76933	868	2144.87471	968	2391.98009
69	170.50271	169	417.60809	269	664.71348	369	911.81886	469	1158.92424	569	1406.02962	669	1653.13500	769	1900.24038	869	2147.34577	969	2394.45115
70	172.97377	170	420.07915	270	667.18453	370	914.28991	470	1161.39529	570	1408.50067	670	1655.60606	770	1902.71144	870	2149.81682	970	2396.92220
71	175.44482	171	422.55020	271	669.65558	371	916.76097	471	1163.86635	571	1410.97173	671	1658.07711	771	1905.18249	871	2152.28787	971	2399.39325
72	177.91587	172	425.02126	272	672.12664	372	919.23202	472	1166.33740	572	1413.44278	672	1660.54816	772	1907.65355	872	2154.75893	972	2401.86431
73	180.38693	173	427.49231	273	674.59769	373	921.70307	473	1168.80845	573	1415.91384	673	1663.01922	773	1910.12460	873	2157.22998	973	2404.33536
74	182.85798	174	429.96336	274	677.06875	374	924.17413	474	1171.27951	574	1418.38489	674	1665.49027	774	1912.59565	874	2159.70103	974	2406.80642
75	185.32904	175	432.43442	275	679.53980	375	926.64518	475	1173.75056	575	1420.85594	675	1667.96133	775	1915.06671	875	2162.17209	975	2409.27747
76	187.80009	176	434.90547	276	682.01085	376	929.11623	476	1176.22162	576	1423.32700	676	1670.43238	776	1917.53776	876	2164.64314	976	2411.74852
77	190.27114	177	437.37653	277	684.48191	377	931.58729	477	1178.69267	577	1425.79805	677	1672.90343	777	1920.00881	877	2167.11420	977	2414.21958
78	192.74220	178	439.84758	278	686.95296	378	934.05834	478	1181.16372	578	1428.26911	678	1675.37449	778	1922.47987	878	2169.58525	978	2416.69063
79	195.21325	179	442.31863	279	689.42401	379	936.52940	479	1183.63478	579	1430.74016	679	1677.84554	779	1924.95092	879	2172.05630	979	2419.16168
80	197.68431	180	444.78969	280	691.89507	380	939.00045	480	1186.10583	580	1433.21121	680	1680.31659	780	1927.42198	880	2174.52736	980	2421.63274
81	200.15536	181	447.26074	281	694.36612	381	941.47150	481	1188.57689	581	1435.68227	681	1682.78765	781	1929.89303	881	2176.99841	981	2424.10379
82	202.62641	182	449.73179	282	696.83718	382	943.94256	482	1191.04794	582	1438.15332	682	1685.25870	782	1932.36408	882	2179.46946	982	2426.57485
83	205.09747	183	452.20285	283	699.30823	383	946.41361	483	1193.51899	583	1440.62437	683	1687.72976	783	1934.83514	883	2181.94052	983	2429.04590
84	207.56852	184	454.67390	284	701.77928	384	948.88466	484	1195.99005	584	1443.09543	684	1690.20081	784	1937.30619	884	2184.41157	984	2431.51695
85	210.03957	185	457.14496	285	704.25034	385	951.35572	485	1198.46110	585	1445.56648	685	1692.67186	785	1939.77724	885	2186.88263	985	2433.98801
86	212.51063	186	459.61601	286	706.72139	386	953.82677	486	1200.93215	586	1448.03754	686	1695.14292	786	1942.24830	886	2189.35368	986	2436.45906
87	214.98168	187	462.08706	287	709.19244	387	956.29783	487	1203.40321	587	1450.50859	687	1697.61397	787	1944.71935	887	2191.82473	987	2438.93012
88	217.45274	188	464.55812	288	711.66350	388	958.76888	488	1205.87426	588	1452.97964	688	1700.08502	788	1947.19041	888	2194.29579	988	2441.40117
89	219.92379	189	467.02917	289	714.13455	389	961.23993	489	1208.34532	589	1455.45070	689	1702.55608	789	1949.66146	889	2196.76684	989	2443.87222
90	222.39484	190	469.50022	290	716.60561	390	963.71099	490	1210.81637	590	1457.92175	690	1705.02713	790	1952.13251	890	2199.23790	990	2446.34328
91	224.86590	191	471.97128	291	719.07666	391	966.18204	491	1213.28742	591	1460.39280	691	1707.49819	791	1954.60357	891	2201.70895	991	2448.81433
92	227.33695	192	474.44233	292	721.54771	392	968.65310	492	1215.75848	592	1462.86386	692	1709.96924	792	1957.07462	892	2204.18000	992	2451.28538
93	229.80800	193	476.91339	293	724.01877	393	971.12415	493	1218.22953	593	1465.33491	693	1712.44029	793	1959.54568	893	2206.65106	993	2453.75644
94	232.27906	194	479.38444	294	726.48982	394	973.59520	494	1220.70058	594	1467.80597	694	1714.91135	794	1962.01673	894	2209.12211	994	2456.22749
95	234.75011	195	481.85549	295	728.96088	395	976.06626	495	1223.17164	595	1470.27702	695	1717.38240	795	1964.48778	895	2211.59316	995	2458.69855
96	237.22117	196	484.32655	296	731.43193	396	978.53731	496	1225.64269	596	1472.74807	696	1719.85346	796	1966.95884	896	2214.06422	996	2461.16960
97	239.69222	197	486.79760	297	733.90298	397	981.00836	497	1228.11375	597	1475.21913	697	1722.32451	797	1969.42089	897	2216.53527	997	2463.64065
98	242.16327	198	489.26866	298	736.37404	398	983.47942	498	1230.58480	598	1477.69018	698	1724.79556	798	1971.90094	898	2219.00633	998	2466.11171
99	244.63433	199	491.73971	299	738.84509	399	985.95047	499	1233.05585	599	1480.16124	699	1727.26662	799	1974.37200	899	2221.47738	999	2468.58276

9.9. VOLUME—CUBIC YARDS TO CUBIC METERS

[Reduction Factor: 1 cubic yard = 0.764 554 857 984 cubic meter]

Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters
0		100	76.45549	200	152.91097	300	229.36646	400	305.82194	500	382.27743	600	458.73291	700	535.18840	800	611.64389	900	688.09937
1	0.76455	101	77.22004	201	153.67553	301	230.13101	401	306.58650	501	383.04198	601	459.49747	701	535.95296	801	612.40844	901	688.86393
2	1.52911	102	77.98460	202	154.44008	302	230.89557	402	307.35105	502	383.80654	602	460.26202	702	536.71751	802	613.17300	902	689.62848
3	2.29366	103	78.74915	203	155.20464	303	231.66012	403	308.11561	503	384.57109	603	461.02658	703	537.48207	803	613.93755	903	690.39304
4	3.05822	104	79.51371	204	155.96919	304	232.42468	404	308.88016	504	385.33565	604	461.79113	704	538.24662	804	614.70211	904	691.15759
5	3.82277	105	80.27826	205	156.73375	305	233.18923	405	309.64472	505	386.10020	605	462.55569	705	539.01117	805	615.46666	905	691.92215
6	4.58733	106	81.04281	206	157.49830	306	233.95379	406	310.40927	506	386.86476	606	463.32024	706	539.77573	806	616.23122	906	692.68670
7	5.35188	107	81.80737	207	158.26286	307	234.71834	407	311.17383	507	387.62931	607	464.08480	707	540.54028	807	616.99577	907	693.45126
8	6.11644	108	82.57192	208	159.02741	308	235.48290	408	311.93838	508	388.39387	608	464.84935	708	541.30484	808	617.76033	908	694.21581
9	6.88099	109	83.33648	209	159.79197	309	236.24745	409	312.70294	509	389.15842	609	465.61391	709	542.06939	809	618.52488	909	694.98037
10	7.64555	110	84.10103	210	160.55652	310	237.01201	410	313.46749	510	389.92298	610	466.37846	710	542.83395	810	619.28943	910	695.74492
11	8.41010	111	84.86559	211	161.32108	311	237.77656	411	314.23205	511	390.68753	611	467.14302	711	543.59850	811	620.05399	911	696.50948
12	9.17466	112	85.63014	212	162.08563	312	238.54112	412	314.99660	512	391.54209	612	467.90757	712	544.36306	812	620.81854	912	697.27403
13	9.93921	113	86.39470	213	162.85018	313	239.30567	413	315.76116	513	392.21664	613	468.67213	713	545.12761	813	621.58310	913	698.03859
14	10.70377	114	87.15925	214	163.61474	314	240.07023	414	316.52571	514	392.98120	614	469.43668	714	545.89217	814	622.34765	914	698.80314
15	11.46832	115	87.92381	215	164.37929	315	240.83478	415	317.29027	515	393.74575	615	470.20124	715	546.65672	815	623.11221	915	699.56770
16	12.23288	116	88.68836	216	165.14385	316	241.59934	416	318.05482	516	394.51031	616	470.96579	716	547.42128	816	623.87676	916	700.33225
17	12.99743	117	89.45292	217	165.90840	317	242.36389	417	318.81938	517	395.27486	617	471.73035	717	548.18583	817	624.64132	917	701.09680
18	13.76199	118	90.21747	218	166.67296	318	243.12844	418	319.58393	518	396.03942	618	472.49490	718	548.95039	818	625.40587	918	701.86136
19	14.52654	119	90.98203	219	167.43751	319	243.89300	419	320.34849	519	396.80397	619	473.25946	719	549.71494	819	626.17043	919	702.62591
20	15.29110	120	91.74658	220	168.20207	320	244.65755	420	321.11304	520	397.56853	620	474.02401	720	550.47950	820	626.93498	920	703.39047
21	16.05565	121	92.51114	221	168.96662	321	245.42211	421	321.87760	521	398.33308	621	474.78857	721	551.24405	821	627.69954	921	704.15502
22	16.82021	122	93.27569	222	169.73118	322	246.18666	422	322.64215	522	399.09764	622	475.55312	722	552.00861	822	628.46409	922	704.91958
23	17.58476	123	94.04025	223	170.49573	323	246.95122	423	323.40670	523	399.86219	623	476.31768	723	552.77316	823	629.22865	923	705.68413
24	18.34932	124	94.80480	224	171.26029	324	247.71577	424	324.17126	524	400.62675	624	477.08223	724	553.53772	824	629.99320	924	706.44869
25	19.11387	125	95.56936	225	172.02484	325	248.48033	425	324.93851	525	401.39130	625	477.84679	725	554.30227	825	630.75776	925	707.21324
26	19.87843	126	96.33391	226	172.78940	326	249.24488	426	325.70037	526	402.15586	626	478.61134	726	555.06683	826	631.52231	926	707.97780
27	20.64298	127	97.09847	227	173.55395	327	250.00944	427	326.46492	527	402.92041	627	479.37590	727	555.83138	827	632.28687	927	708.74235
28	21.40754	128	97.86302	228	174.31851	328	250.77399	428	327.22948	528	403.68497	628	480.14045	728	556.59594	828	633.05142	928	709.50691
29	22.17209	129	98.62758	229	175.08306	329	251.53855	429	327.99403	529	404.44952	629	480.90501	729	557.36049	829	633.81598	929	710.27146
30	22.93665	130	99.39213	230	175.84762	330	252.30310	430	328.75859	530	405.21407	630	481.66956	730	558.12505	830	634.58053	930	711.03602
31	23.70120	131	100.15669	231	176.61217	331	253.06766	431	329.52314	531	405.97863	631	482.43412	731	558.88960	831	635.34509	931	711.80057
32	24.46576	132	100.92124	232	177.37673	332	253.83221	432	330.28770	532	406.74318	632	483.19867	732	559.65416	832	636.10964	932	712.56513
33	25.23031	133	101.68580	233	178.14128	333	254.59677	433	331.05225	533	407.50774	633	483.96323	733	560.41871	833	636.87420	933	713.32968
34	25.99487	134	102.45035	234	178.90584	334	255.36132	434	331.81681	534	408.27229	634	484.72778	734	561.18327	834	637.63875	934	714.09424
35	26.75942	135	103.21491	235	179.67039	335	256.12588	435	332.58136	535	409.03685	635	485.49233	735	561.94782	835	638.40331	935	714.85879
36	27.52397	136	103.97946	236	180.43495	336	256.89043	436	333.34592	536	409.80140	636	486.25689	736	562.71238	836	639.16786	936	715.62335
37	28.28853	137	104.74402	237	181.19950	337	257.65499	437	334.11047	537	410.56596	637	487.02144	737	563.47693	837	639.93242	937	716.38790
38	29.05308	138	105.50857	238	181.96406	338	258.41954	438	334.87503	538	411.33051	638	487.78600	738	564.24149	838	640.69697	938	717.15246
39	29.81764	139	106.27313	239	182.72861	339	259.18410	439	335.63958	539	412.09507	639	488.55055	739	565.00604	839	641.46153	939	717.91701
40	30.58219	140	107.03768	240	183.49317	340	259.94865	440	336.40414	540	412.85962	640	489.31511	740	565.77059	840	642.22608	940	718.68157
41	31.34675	141	107.80223	241	184.25772	341	260.71321	441	337.16869	541	413.62418	641	490.07966	741	566.53515	841	642.99064	941	719.44612
42	32.11130	142	108.56679	242	185.02228	342	261.47776	442	337.93325	542	414.38873	642	490.84422	742	567.29970	842	643.75519	942	720.21068
43	32.87586	143	109.33134	243	185.78683	343	262.24232	443	338.69780	543	415.15329	643	491.60877	743	568.06426	843	644.51975	943	720.97523
44	33.64041	144	110.09590	244	186.55139	344	263.00687	444	339.46236	544	415.91784	644	492.37333	744	568.82881	844	645.28430	944	721.73979
45	34.40497	145	110.86045	245	187.31594	345	263.77143	445	340.22691	545	416.68240	645	493.13788	745	569.59337	845	646.04885	945	722.50434
46	35.16952	146	111.62501	246	188.08050	346	264.53598	446	340.99147	546	417.44695	646	493.90244	746	570.35792	846	646.81341	946	723.26890
47	35.93408	147	112.38956	247	188.84505	347	265.30054	447	341.75602	547	418.21151	647	494.66699	747	571.12248	847	647.57796	947	724.03345
48	36.69863	148	113.15412	248	189.60960	348	266.06509	448	342.52058	548	418.97606	648	495.43155	748	571.88703	848	648.34252	948	724.79801
49	37.46319	149	113.91867	249	190.37416	349	266.82965	449	343.28513	549	419.74062	649	496.19610	749	572.65159	849	649.10707	949	725.56256

50	38.22774	150	114.68323	250	191.13871	350	267.59420	450	344.04969	550	420.50517	650	496.96066	750	573.41614	850	649.87163	950	726.32712
51	38.99230	151	115.44778	251	191.90327	351	268.35876	451	344.81424	551	421.26973	651	497.72521	751	574.18070	851	650.63618	951	727.09167
52	39.75685	152	116.21234	252	192.66782	352	269.12331	452	345.57880	552	422.03428	652	498.48977	752	574.94525	852	651.40074	952	727.85622
53	40.52141	153	116.97689	253	193.43238	353	269.88786	453	346.34335	553	422.79884	653	499.25432	753	575.70981	853	652.16529	953	728.62078
54	41.28596	154	117.74145	254	194.19693	354	270.65242	454	347.10791	554	423.56339	654	500.01888	754	576.47436	854	652.92985	954	729.38533
55	42.05052	155	118.50600	255	194.96149	355	271.41697	455	347.87246	555	424.32795	655	500.78343	755	577.23892	855	653.69440	955	730.14989
56	42.81507	156	119.27056	256	195.72604	356	272.18153	456	348.63702	556	425.09250	656	501.54799	756	578.00347	856	654.45896	956	730.91444
57	43.57963	157	120.03511	257	196.49060	357	272.94608	457	349.40157	557	425.85706	657	502.31254	757	578.76803	857	655.22351	957	731.67900
58	44.34418	158	120.79967	258	197.25515	358	273.71064	458	350.16612	558	426.62161	658	503.07710	758	579.53258	858	655.98807	958	732.44355
59	45.10874	159	121.56422	259	198.01971	359	274.47519	459	350.93068	559	427.38617	659	503.84165	759	580.29714	859	656.75262	959	733.20811
60	45.87329	160	122.32878	260	198.78426	360	275.23975	460	351.69523	560	428.15072	660	504.60621	760	581.06169	860	657.51718	960	733.97266
61	46.63785	161	123.09333	261	199.54882	361	276.00430	461	352.45979	561	428.91528	661	505.37076	761	581.82625	861	658.28173	961	734.73722
62	47.40240	162	123.85789	262	200.31337	362	276.76886	462	353.22434	562	429.67983	662	506.13532	762	582.59080	862	659.04629	962	735.50177
63	48.16696	163	124.62244	263	201.07793	363	277.53341	463	353.98890	563	430.44439	663	506.89987	763	583.35536	863	659.81084	963	736.26633
64	48.93151	164	125.38700	264	201.84248	364	278.29797	464	354.75345	564	431.20894	664	507.66443	764	584.11991	864	660.57540	964	737.03088
65	49.69607	165	126.15155	265	202.60704	365	279.06252	465	355.51801	565	431.97349	665	508.42898	765	584.88447	865	661.33995	965	737.79544
66	50.46062	166	126.91611	266	203.37159	366	279.82708	466	356.28256	566	432.73805	666	509.19354	766	585.64902	866	662.10451	966	738.55999
67	51.22518	167	127.68066	267	204.13615	367	280.59163	467	357.04712	567	433.50260	667	509.95809	767	586.41358	867	662.86906	967	739.32455
68	51.98973	168	128.44522	268	204.90070	368	281.35619	468	357.81167	568	434.26716	668	510.72265	768	587.17813	868	663.63362	968	740.08910
69	52.75429	169	129.20977	269	205.66526	369	282.12074	469	358.57623	569	435.03171	669	511.48720	769	587.94269	869	664.39817	969	740.85366
70	53.51884	170	129.97433	270	206.42981	370	282.88530	470	359.34078	570	435.79627	670	512.25175	770	588.70724	870	665.16273	970	741.61821
71	54.28339	171	130.73888	271	207.19437	371	283.64985	471	360.10534	571	436.56082	671	513.01631	771	589.47180	871	665.92728	971	742.38277
72	55.04795	172	131.50344	272	207.95892	372	284.41441	472	360.86989	572	437.32538	672	513.78086	772	590.23635	872	666.69184	972	743.14732
73	55.81250	173	132.26799	273	208.72348	373	285.17896	473	361.63445	573	438.08993	673	514.54542	773	591.00091	873	667.45639	973	743.91188
74	56.57706	174	133.03255	274	209.48803	374	285.94352	474	362.39900	574	438.85449	674	515.30997	774	591.76546	874	668.22095	974	744.67643
75	57.34161	175	133.79710	275	210.25259	375	286.70807	475	363.16356	575	439.61904	675	516.07453	775	592.53001	875	668.98550	975	745.44099
76	58.10617	176	134.56166	276	211.01714	376	287.47263	476	363.92811	576	440.38360	676	516.83908	776	593.29457	876	669.75006	976	746.20554
77	58.87072	177	135.32621	277	211.78170	377	288.23718	477	364.69267	577	441.14815	677	517.60364	777	594.05912	877	670.51461	977	746.97010
78	59.63528	178	136.09076	278	212.54625	378	289.00174	478	365.45722	578	441.91271	678	518.36819	778	594.82368	878	671.27917	978	747.73465
79	60.39983	179	136.85532	279	213.31081	379	289.76629	479	366.22178	579	442.67726	679	519.13275	779	595.58823	879	672.04372	979	748.49921
80	61.16439	180	137.61987	280	214.07536	380	290.53085	480	366.98633	580	443.44182	680	519.89730	780	596.35279	880	672.80828	980	749.26376
81	61.92894	181	138.38443	281	214.83992	381	291.29540	481	367.75089	581	444.20637	681	520.66186	718	597.11734	881	673.57283	981	750.02832
82	62.69350	182	139.14898	282	215.60447	382	292.05996	482	368.51544	582	444.97093	682	521.42641	782	597.88190	882	674.33738	982	750.79287
83	63.45805	183	139.91354	283	216.36902	383	292.82451	483	369.28000	583	445.73548	683	522.19097	783	598.64645	883	675.10194	983	751.55743
84	64.22261	184	140.67809	284	217.13358	384	293.58907	484	370.04455	584	446.50004	684	522.95552	784	599.41101	884	675.86649	984	752.32198
85	64.98716	185	141.44265	285	217.89813	385	294.35362	485	370.80911	585	447.26459	685	523.72008	785	600.17556	885	676.63105	985	753.08654
86	65.75172	186	142.20720	286	218.66269	386	295.11818	486	371.57366	586	448.02915	686	524.48463	786	600.94012	886	677.39560	986	753.85109
87	66.51627	187	142.97176	287	219.42724	387	295.88273	487	372.33822	587	448.79370	687	525.24919	787	601.70467	887	678.16016	987	754.61564
88	67.28083	188	143.73631	288	220.19180	388	296.64728	488	373.10277	588	449.55826	688	526.01374	788	602.46923	888	678.92471	988	755.38020
89	68.04538	189	144.50087	289	220.95635	389	297.41184	489	373.86733	589	450.32281	689	526.77830	789	603.23378	889	679.68927	989	756.14475
90	68.80994	190	145.26542	290	221.72091	390	298.17639	490	374.63188	590	451.08737	690	527.54285	790	603.99834	890	680.45382	990	756.90931
91	69.57449	191	146.02998	291	222.48546	391	298.94095	491	375.39644	591	451.85192	691	528.30741	791	604.76289	891	681.21838	991	757.67386
92	70.33905	192	146.79453	292	223.25002	392	299.70550	492	376.16099	592	452.61648	692	529.07196	792	605.52745	892	681.98293	992	758.43842
93	71.10360	193	147.55909	293	224.01457	393	300.47006	493	376.92554	593	453.38103	693	529.83652	793	606.29200	893	682.74749	993	759.20297
94	71.86816	194	148.32364	294	224.77913	394	301.23461	494	377.69010	594	454.14559	694	530.60107	794	607.05656	894	683.51204	994	759.96753
95	72.63271	195	149.08820	295	225.54368	395	301.99917	495	378.45465	595	454.91014	695	531.36563	795	607.82111	895	684.27660	995	760.73208
96	73.39727	196	149.85275	296	226.30824	396	302.76372	496	379.21921	596	455.67470	696	532.13018	796	608.58567	896	685.04115	996	761.49664
97	74.16182	197	150.61731	297	227.07279	397	303.52828	497	379.98376	597	456.43925	697	532.89474	797	609.35022	897	685.80571	997	762.26119
98	74.92638	198	151.38186	298	227.83735	398	304.29283	498	380.74832	598	457.20381	698	533.65929	798	610.11478	898	686.57026	908	763.02575
99	75.69093	199	152.14642	299	228.60190	399	305.05739	499	381.51287	599	457.96836	699	534.42385	799	610.87933	899	687.33482	999	763.79030

9.10 VOLUME—CUBIC METERS TO CUBIC YARDS

[Reduction Factor: 1 cubic meter = 1.307 950 619 cubic yards]

Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards	Cubic Meters	Cubic Yards
0		100	130.79506	200	261.59012	300	392.38519	400	523.18025	500	653.97531	600	784.77037	700	915.56543	800	1046.36049	900	1177.15556
1	1.30795	101	132.10301	201	262.89807	301	393.69314	401	524.48820	501	655.28326	601	786.07832	701	916.87338	801	1047.66844	901	1178.46351
2	2.61590	102	133.41096	202	264.20602	302	395.00109	402	525.79615	502	656.59121	602	787.38627	702	918.18133	802	1048.97639	902	1179.77146
3	3.92385	103	134.71891	203	265.51398	303	396.30904	403	527.10410	503	657.89916	603	788.69422	703	919.48928	803	1050.28435	903	1181.07941
4	5.23180	104	136.02686	204	266.82193	304	397.61699	404	528.41205	504	659.20711	604	790.00217	704	920.79723	804	1051.59230	904	1182.38736
5	6.53975	105	137.33481	205	268.12988	305	398.92494	405	529.72000	505	660.51506	605	791.31012	705	922.10518	805	1052.90025	905	1183.69531
6	7.84770	106	138.64277	206	269.43783	306	400.23289	406	531.02795	506	661.82301	606	792.61807	706	923.41314	806	1054.20820	906	1185.00326
7	9.15565	107	139.95072	207	270.74578	307	401.54084	407	532.33590	507	663.13096	607	793.92602	707	924.72109	807	1055.51615	907	1186.31121
8	10.46360	108	141.25867	208	272.05373	308	402.84879	408	533.64385	508	664.43891	608	795.23398	708	926.02904	808	1056.82410	908	1187.61916
9	11.77156	109	142.56662	209	273.36168	309	404.15674	409	534.95180	509	665.74686	609	796.54193	709	927.33699	809	1058.13205	909	1188.92711
10	13.07951	110	143.87457	210	274.66963	310	405.46469	410	536.25975	510	667.05481	610	797.84988	710	928.64494	810	1059.44000	910	1190.23506
11	14.38746	111	145.18252	211	275.97758	311	406.77264	411	537.56770	511	668.36277	611	799.15783	711	929.95289	811	1060.74795	911	1191.54301
12	15.69541	112	146.49047	212	277.28553	312	408.08059	412	538.87565	512	669.67072	612	800.46578	712	931.26084	812	1062.05590	912	1192.85096
13	17.00336	113	147.79842	213	278.59348	313	409.38854	413	540.18360	513	670.97867	613	801.77373	713	932.56879	813	1063.36385	913	1194.15891
14	18.31131	114	149.10637	214	279.90143	314	410.69649	414	541.49156	514	672.28662	614	803.08168	714	933.87674	814	1064.67180	914	1195.46686
15	19.61926	115	150.41432	215	281.20938	315	412.00444	415	542.79951	515	673.59457	615	804.38963	715	935.18469	815	1065.97975	915	1196.77481
16	20.92721	116	151.72227	216	282.51733	316	413.31239	416	544.10746	516	674.90252	616	805.69758	716	936.49264	816	1067.28770	916	1198.08277
17	22.23516	117	153.03022	217	283.82528	317	414.62035	417	545.41541	517	676.21047	617	807.00553	717	937.80059	817	1068.59565	917	1199.39072
18	23.54311	118	154.33817	218	285.13323	318	415.92830	418	546.72336	518	677.51842	618	808.31348	718	939.10854	818	1069.90360	918	1200.69867
19	24.85106	119	155.64612	219	286.44119	319	417.23625	419	548.03131	519	678.82637	619	809.62143	719	940.41649	819	1071.21156	919	1202.00662
20	26.15901	120	156.95407	220	287.74914	320	418.54420	420	549.33926	520	680.13432	620	810.92938	720	941.72444	820	1072.51951	920	1203.31457
21	27.46696	121	158.26202	221	289.05709	321	419.85215	421	550.64721	521	681.44227	621	812.23733	721	943.03239	821	1073.82746	921	1204.62252
22	28.77491	122	159.56998	222	290.36504	322	421.16010	422	551.95516	522	682.75022	622	813.54528	722	944.34035	822	1075.13541	922	1205.93047
23	30.08286	123	160.87793	223	291.67299	323	422.46805	423	553.26311	523	684.05817	623	814.85323	723	945.64830	823	1076.44336	923	1207.23842
24	31.39081	124	162.18588	224	292.98094	324	423.77600	424	554.57106	524	685.36612	624	816.16119	724	946.95625	824	1077.75131	924	1208.54637
25	32.69877	125	163.49383	225	294.28889	325	425.08395	425	555.87901	525	686.67407	625	817.46914	725	948.26420	825	1079.05926	925	1209.85432
26	34.00672	126	164.80178	226	295.59684	326	426.39190	426	557.18696	526	687.98202	626	818.77709	726	949.57215	826	1080.36721	926	1211.16227
27	35.31467	127	166.10973	227	296.90479	327	427.69985	427	558.49491	527	689.28998	627	820.08504	727	950.88010	827	1081.67516	927	1212.47022
28	36.62262	128	167.41768	228	298.21274	328	429.00780	428	559.80286	528	690.59793	628	821.39299	728	952.18805	828	1082.98311	928	1213.77817
29	37.93057	129	168.72563	229	299.52069	329	430.31575	429	561.11081	529	691.90588	629	822.70094	729	953.49600	829	1084.29106	929	1215.08612
30	39.23852	130	170.03358	230	300.82864	330	431.62370	430	562.41877	530	693.21383	630	824.00889	730	954.80395	830	1085.59901	930	1216.39407
31	40.54647	131	171.34153	231	302.13659	331	432.93165	431	563.72672	531	694.52178	631	825.31684	731	956.11190	831	1086.90696	931	1217.70202
32	41.85442	132	172.64948	232	303.44454	332	434.23960	432	565.03467	532	695.82973	632	826.62479	732	957.41985	832	1088.21491	932	1219.00998
33	43.16237	133	173.95743	233	304.75249	333	435.54756	433	566.34262	533	697.13768	633	827.93274	733	958.72780	833	1089.52286	933	1220.31793
34	44.47032	134	175.26538	234	306.06044	334	436.85551	434	567.65057	534	698.44563	634	829.24069	734	960.03575	834	1090.83081	934	1221.62588
35	45.77827	135	176.57333	235	307.36839	335	438.16346	437	568.95852	535	699.75358	635	830.54864	735	961.34370	835	1092.13877	935	1222.93383
36	47.08622	136	177.88128	236	308.67635	336	439.47141	436	570.26647	536	701.06153	636	831.85659	736	962.65165	836	1093.44672	936	1224.24178
37	48.39417	137	179.18923	237	309.98430	337	440.77936	437	571.57442	537	702.36948	637	833.16454	737	963.95960	837	1094.75467	937	1225.54973
38	49.70212	138	180.49719	238	311.29225	338	442.08731	438	572.88237	538	703.67743	638	834.47249	738	965.26756	838	1096.06262	938	1226.85768
39	51.01007	139	181.80514	239	312.60020	339	443.39526	439	574.19032	539	704.98538	639	835.78044	739	966.57551	839	1097.37057	939	1228.16563
40	52.31802	140	183.11309	240	313.90815	340	444.70321	440	575.49827	540	706.29333	640	837.08839	740	967.88346	840	1098.67852	940	1229.47358
41	53.62598	141	184.42104	241	315.21610	341	446.01116	441	576.80622	541	707.60128	641	838.39635	741	969.19141	841	1099.98647	941	1230.78153
42	54.93393	142	185.72899	242	316.52405	342	447.31911	442	578.11417	542	708.90923	642	839.70430	742	970.49936	842	1101.29442	942	1232.08948
43	56.24188	143	187.03694	243	317.83200	343	448.62706	443	579.42212	543	710.21719	643	841.01225	743	971.80731	843	1102.60237	943	1233.39743
44	57.54983	144	188.34489	244	319.13995	344	449.93501	444	580.73007	544	711.52514	644	842.32020	744	973.11526	844	1103.91032	944	1234.70538
45	58.85778	145	189.65284	245	320.44790	345	451.24296	445	582.03802	545	712.83309	645	843.62815	745	974.42321	845	1105.21827	945	1236.01333
46	60.16573	146	190.96079	246	321.75585	346	452.55091	446	583.34598	546	714.14104	646	844.93610	746	975.73116	846	1106.52622	946	1237.32128
47	61.47368	147	192.26874	247	323.06380	347	453.85886	447	584.65393	547	715.44899	647	846.24405	747	977.03911	847	1107.83417	947	1238.62923
48	62.78163	148	193.57669	248	324.37175	348	455.16681	448	585.96188	548	716.75694	648	847.55200	748	978.34706	848	1109.14212	948	1239.93718
49	64.08958	149	194.88464	249	325.67970	349	456.47477	449	587.26983	549	718.06489	649	848.85995	749	979.65501	849	1110.45007	949	1241.24514

50	65.39753	150	196.19259	250	326.98765	350	457.78272	450	588.57778	550	719.37284	650	850.16790	750	980.96296	850	1111.75802	950	1242.55309
51	66.70548	151	197.50054	251	328.29560	351	459.09067	451	589.88573	551	720.68079	651	851.47585	751	982.27091	851	1113.06598	951	1243.86104
52	68.01343	152	198.80849	252	329.60356	352	460.39862	452	591.19368	552	721.98874	652	852.78380	752	983.57886	852	1114.37393	952	1245.16899
53	69.32138	153	200.11644	253	330.91151	353	461.70657	453	592.50163	553	723.29669	653	854.09175	753	984.88681	853	1115.68188	953	1246.47694
54	70.62933	154	201.42440	254	332.21946	354	463.01452	454	593.80958	554	724.60464	654	855.39970	754	986.19477	854	1116.98983	954	1247.78489
55	71.93728	155	202.73235	255	333.52741	355	464.32247	455	595.11753	555	725.91259	655	856.70765	755	987.50272	855	1118.29778	955	1249.09284
56	73.24523	156	204.04030	256	334.83536	356	465.63042	456	596.42548	556	727.22054	656	858.01560	756	988.81067	856	1119.60573	956	1250.40079
57	74.55319	157	205.34825	257	336.14331	357	466.93837	457	597.73343	557	728.52849	657	859.32356	757	990.11862	857	1120.91368	957	1251.70874
58	75.86114	158	206.65620	258	337.45126	358	468.24632	458	599.04138	558	729.83644	658	860.63151	758	991.42657	858	1122.22163	958	1253.01669
59	77.16909	159	207.96415	259	338.75921	359	469.55427	459	600.34933	559	731.14439	659	861.93946	759	992.73452	859	1123.52958	959	1254.32464
60	78.47704	160	209.27210	260	340.06716	360	470.86222	460	601.65728	560	732.45235	660	863.24741	760	994.04247	860	1124.83753	960	1255.63259
61	79.78499	161	210.58005	261	341.37511	361	472.17017	461	602.96523	561	733.76030	661	864.55536	761	995.35042	861	1126.14548	961	1256.94054
62	81.09294	162	211.88800	262	342.68306	362	473.47812	462	604.27319	562	735.06825	662	865.86331	762	996.65837	862	1127.45343	962	1258.24849
63	82.40089	163	213.19595	263	343.99101	363	474.78607	463	605.58114	563	736.37620	663	867.17126	763	997.96632	863	1128.76138	963	1259.55644
64	83.70884	164	214.50390	264	345.29896	364	476.09402	464	606.88909	564	737.68415	664	868.47921	764	999.27427	864	1130.06933	964	1260.86439
65	85.01679	165	215.81185	265	346.60691	365	477.40198	465	608.19704	565	738.99210	665	869.78716	765	1000.58222	865	1131.37728	965	1262.17235
66	86.32474	166	217.11980	266	347.91486	366	478.70993	466	609.50499	566	740.30005	666	871.09511	766	1001.89017	866	1132.68523	966	1263.48030
67	87.63269	167	218.42775	267	349.22281	367	480.01788	467	610.81294	567	741.60800	667	872.40306	767	1003.19812	867	1133.99318	967	1264.78825
68	88.94064	168	219.73570	268	350.53077	368	481.32583	468	612.12089	568	742.91595	668	873.71101	768	1004.50607	868	1135.30114	968	1266.09620
69	90.24859	169	221.04365	269	351.83872	369	482.63378	469	613.42884	569	744.22390	669	875.01896	769	1005.81402	869	1136.60909	969	1267.40415
70	91.55654	170	222.35160	270	353.14667	370	483.94173	470	614.73679	570	745.53185	670	876.32691	770	1007.12198	870	1137.91704	970	1268.71210
71	92.86449	171	223.65956	271	354.45462	371	485.24968	471	616.04474	571	746.83980	671	877.63486	771	1008.42993	871	1139.22499	971	1270.02005
72	94.17244	172	224.96751	272	355.76257	372	486.55763	472	617.35269	572	748.14775	672	878.94281	772	1009.73788	872	1140.53294	972	1271.32800
73	95.48040	173	226.27546	273	357.07052	373	487.86558	473	618.66064	573	749.45570	673	880.25077	773	1011.04583	873	1141.84089	973	1272.63595
74	96.78835	174	227.58341	274	358.37847	374	489.17353	474	619.96859	574	750.76365	674	881.55872	774	1012.35378	874	1143.14884	974	1273.94390
75	98.09630	175	228.89136	275	359.68642	375	490.48148	475	621.27654	575	752.07160	675	882.86667	775	1013.66173	875	1144.45679	975	1275.25185
76	99.40425	176	230.19931	276	360.99437	376	491.78943	476	622.58449	576	753.37956	676	884.17462	776	1014.96968	876	1145.76474	976	1276.55980
77	100.71220	177	231.50726	277	362.30232	377	493.09738	477	623.89244	577	754.68751	677	885.48257	777	1016.27763	877	1147.07269	977	1277.86775
78	102.02015	178	232.81521	278	363.61027	378	494.40533	478	625.20039	578	755.99546	678	886.79052	778	1017.58558	878	1148.38064	978	1279.17570
79	103.32810	179	234.12316	279	364.91822	379	495.71328	479	626.50835	579	757.30341	679	888.09847	779	1018.89353	879	1149.68859	979	1280.48365
80	104.63605	180	235.43111	280	366.22617	380	497.02123	480	627.81630	580	758.61136	680	889.40642	780	1020.20148	880	1150.99654	980	1281.79160
81	105.94400	181	236.73906	281	367.53412	381	498.32919	481	629.12425	581	759.91931	681	890.71437	781	1021.50943	881	1152.30449	981	1283.09956
82	107.25195	182	238.04701	282	368.84207	382	499.63714	482	630.43220	582	761.22726	682	892.02232	782	1022.81738	882	1153.61244	982	1284.40751
83	108.55990	183	239.35496	283	370.15002	383	500.94509	483	631.74015	583	762.53521	683	893.33027	783	1024.12533	883	1154.92039	983	1285.71546
84	109.86785	184	240.66291	284	371.45798	384	502.25304	484	633.04810	584	763.84316	684	894.63822	784	1025.43328	884	1156.22835	984	1287.02341
85	111.17580	185	241.97086	285	372.76593	385	503.56099	485	634.35605	585	765.15111	685	895.94617	785	1026.74123	885	1157.53630	985	1288.33136
86	112.48375	186	243.27881	286	374.07388	386	504.86894	486	635.66400	586	766.45906	686	897.25412	786	1028.04918	886	1158.84425	986	1289.63931
87	113.79170	187	244.58677	287	375.38183	387	506.17689	487	636.97195	587	767.76701	687	878.56207	787	1029.35714	887	1160.15220	987	1290.94726
88	115.09965	188	245.89472	288	376.68978	388	507.48484	488	638.27990	588	769.07496	688	899.87002	788	1030.66509	888	1161.46015	988	1292.25521
89	116.40760	189	247.20267	289	377.99773	389	508.79279	489	639.58785	589	770.38291	689	901.17798	789	1031.97304	889	1162.76810	989	1293.56316
90	117.71556	190	248.51062	290	379.30568	390	510.10074	490	640.89580	590	771.69086	690	902.48593	790	1033.28099	890	1164.07605	990	1294.87111
91	119.02351	191	249.81857	291	380.61363	391	511.40869	491	642.20375	591	772.99881	691	903.79388	791	1034.58894	891	1165.38400	991	1296.17906
92	120.33146	192	251.12652	292	381.92158	392	512.71664	492	643.51170	592	774.30677	692	905.10183	792	1035.89689	892	1166.69195	992	1297.48701
93	121.63941	193	252.43447	293	383.22953	393	514.02459	493	644.81965	593	775.61472	693	906.40978	793	1037.20484	893	1167.99990	993	1298.79496
94	122.94736	194	253.74242	294	384.53748	394	515.33254	494	646.12760	594	776.92267	694	907.71773	794	1038.51279	894	1169.30785	994	1300.10291
95	124.25531	195	255.05037	295	385.84543	395	516.64049	495	647.43556	595	778.23062	695	909.02568	795	1039.82074	895	1170.61580	995	1301.41086
96	125.56326	196	256.35832	296	387.15338	396	517.94844	496	648.74351	596	779.53857	696	910.33363	796	1041.12869	896	1171.92375	996	1302.71881
97	126.87121	197	257.66627	297	388.46133	397	519.25639	497	650.05146	597	780.84652	697	911.64158	797	1042.43664	897	1173.23170	997	1304.02677
98	128.17916	198	258.97422	298	389.76928	398	520.56435	498	651.35941	598	782.15447	698	912.94953	798	1043.74459	898	1174.53965	998	1305.33472
99	129.48711	199	260.28217	299	391.07723	399	521.87230	499	652.66736	599	783.46242	699	914.25748	799	1045.05254	899	1175.84760	999	1306.64267

9.11. CAPACITY—LIQUID QUARTS TO LITERS

[Reduction Factor: 1 liquid quart = 0.946 326 45 liters]

Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters
0		100	94.633	200	189.265	300	283.898	400	378.531	500	473.163	600	567.796	700	662.429	800	757.061	900	851.694
1	0.9463	101	95.579	201	190.212	301	284.844	401	379.477	501	474.110	601	568.742	701	663.375	801	758.007	901	852.640
2	1.8927	102	96.525	202	191.158	302	285.791	402	380.423	502	475.056	602	569.689	702	664.321	802	758.954	902	853.586
3	2.8390	103	97.472	203	192.104	303	286.737	403	381.370	503	476.002	603	570.635	703	665.267	803	759.900	903	854.533
4	3.7853	104	98.418	204	193.051	304	287.683	404	382.316	504	476.949	604	571.581	704	666.214	804	760.846	904	855.479
5	4.7316	105	99.364	205	193.997	305	288.630	405	383.262	505	477.895	605	572.528	705	667.160	805	761.793	905	856.425
6	5.6780	106	100.311	206	194.943	306	289.576	406	384.209	506	478.841	606	573.474	706	668.106	806	762.739	906	857.372
7	6.6243	107	101.257	207	195.890	307	290.522	407	385.155	507	479.788	607	574.420	707	669.053	807	763.685	907	858.318
8	7.5706	108	102.203	208	196.836	308	291.469	408	386.101	508	480.734	608	575.366	708	669.999	808	764.632	908	859.264
9	8.5169	109	103.150	209	197.782	309	292.415	409	387.048	509	481.680	609	576.313	709	670.945	809	765.578	909	860.211
10	9.4633	110	104.096	210	198.729	310	293.361	410	387.994	510	482.626	610	577.259	710	671.892	810	766.524	910	861.157
11	10.4096	111	105.042	211	199.675	311	294.308	411	388.940	511	483.573	611	578.205	711	672.838	811	767.471	911	862.103
12	11.3559	112	105.989	212	200.621	312	295.254	412	389.886	512	484.519	612	579.152	712	673.784	812	768.417	912	863.050
13	12.3022	113	106.935	213	201.568	313	296.200	413	390.833	513	485.465	613	580.098	713	674.731	813	769.363	913	863.996
14	13.2486	114	107.881	214	202.514	314	297.147	414	391.779	514	486.412	614	581.044	714	675.677	814	770.310	914	864.942
15	14.1949	115	108.828	215	203.460	315	298.093	415	392.725	515	487.358	615	581.991	715	676.623	815	771.256	915	865.889
16	15.1412	116	109.774	216	204.407	316	299.039	416	393.672	516	488.304	616	582.937	716	677.570	816	772.202	916	866.835
17	16.0875	117	110.720	217	205.353	317	299.985	417	394.618	517	489.251	617	583.883	717	678.516	817	773.149	917	867.781
18	17.0339	118	111.667	218	206.299	318	300.932	418	395.564	518	490.197	618	584.830	718	679.462	818	774.095	918	868.728
19	17.9802	119	112.613	219	207.245	319	301.878	419	396.511	519	491.143	619	585.776	719	680.409	819	775.041	919	869.674
20	18.9265	120	113.559	220	208.192	320	302.824	420	397.457	520	492.090	620	586.722	720	681.355	820	775.988	920	870.620
21	19.8729	121	114.506	221	209.138	321	303.771	421	398.403	521	493.036	621	587.669	721	682.301	821	776.934	921	871.567
22	20.8192	122	115.452	222	210.084	322	304.717	422	399.350	522	493.982	622	588.615	722	683.248	822	777.880	922	872.513
23	21.7655	123	116.398	223	211.031	323	305.663	423	400.296	523	494.929	623	589.561	723	684.194	823	778.827	923	873.459
24	22.7118	124	117.344	224	211.977	324	306.610	424	401.242	524	495.875	624	590.508	724	685.140	824	779.773	924	874.406
25	23.6582	125	118.291	225	212.923	325	307.556	425	402.189	525	496.821	625	591.454	725	686.087	825	780.719	925	875.352
26	24.6045	126	119.237	226	213.870	326	308.502	426	403.135	526	497.768	626	592.400	726	687.033	826	781.666	926	876.298
27	25.5508	127	120.183	227	214.816	327	309.449	427	404.081	527	498.714	627	593.347	727	687.979	827	782.612	927	877.245
28	26.4971	128	121.130	228	215.762	328	310.395	428	405.028	528	499.660	628	594.293	728	688.926	828	783.558	928	878.191
29	27.4435	129	122.076	229	216.709	329	311.341	429	405.974	529	500.607	629	595.239	729	689.872	829	784.505	929	879.137
30	28.3898	130	123.022	230	217.655	330	312.288	430	406.920	530	501.553	630	596.186	730	690.818	830	785.451	930	880.084
31	29.3361	131	123.969	231	218.601	331	313.234	431	407.867	531	502.499	631	597.132	731	691.765	831	786.397	931	881.030
32	30.2824	132	124.915	232	219.548	332	314.180	432	408.813	532	503.446	632	598.078	732	692.711	832	787.344	932	881.976
33	31.2288	133	125.861	232	220.494	333	315.127	433	409.759	533	504.392	633	599.025	733	693.657	833	788.290	933	882.923
34	32.1751	134	126.808	234	221.440	334	316.073	434	410.706	534	505.338	634	599.971	734	694.604	834	789.236	934	883.869
35	33.1214	135	127.754	235	222.387	335	317.019	435	411.652	535	506.285	635	600.917	735	695.550	835	790.183	935	884.815
36	34.0678	136	128.700	236	223.333	336	317.966	436	412.598	536	507.231	636	601.864	736	696.496	836	791.129	936	885.762
37	35.0141	137	129.647	237	224.279	337	318.912	437	413.545	537	508.177	637	602.810	737	697.443	837	792.075	937	886.708
38	35.9604	138	130.593	238	225.226	338	319.858	438	414.491	538	509.124	638	603.756	738	698.389	838	793.022	938	887.654
39	36.9067	139	131.539	239	226.172	339	320.805	439	415.437	539	510.070	639	604.703	739	699.335	839	793.968	939	888.601
40	37.8531	140	132.486	240	227.118	340	321.751	440	416.384	540	511.016	640	605.649	740	700.282	840	794.914	940	889.547
41	38.7994	141	133.432	241	228.065	341	322.697	441	417.330	541	511.963	641	606.595	741	701.228	841	795.861	941	890.493
42	39.7457	142	134.378	242	229.011	342	323.644	442	418.276	542	512.909	642	607.542	742	702.174	842	796.807	942	891.440
43	40.6920	143	135.325	243	229.957	343	324.590	443	419.223	543	513.855	643	608.488	743	703.121	843	797.753	943	892.386
44	41.6384	144	136.271	244	230.904	344	325.536	444	420.169	544	514.802	644	609.434	744	704.067	844	798.700	944	893.332
45	42.5847	145	137.217	245	231.850	345	326.483	445	421.115	545	515.748	645	610.381	745	705.013	845	799.646	945	894.278
46	43.5310	146	138.164	246	232.796	346	327.429	446	422.062	546	516.694	646	611.327	746	705.960	846	800.592	946	895.225
47	44.4773	147	139.110	247	233.743	347	328.375	447	423.008	547	517.641	647	612.273	747	706.906	847	801.539	947	896.171
48	45.4237	148	140.056	248	234.689	348	329.322	448	423.954	548	518.587	648	613.220	748	707.852	848	802.485	948	897.117
49	46.3700	149	141.003	249	235.635	349	330.268	449	424.901	549	519.533	649	614.166	749	708.799	849	803.431	949	898.064

50	47.3163	150	141.949	250	236.582	350	331.214	450	425.847	550	520.480	650	615.112	750	709.745	850	804.377	950	899.010
51	48.2626	151	142.895	251	237.528	351	332.161	451	426.793	551	521.426	651	616.059	751	710.691	851	805.324	951	899.956
52	49.2090	152	143.842	252	238.474	352	333.107	452	427.740	552	522.372	652	617.005	752	711.637	852	806.270	952	900.903
53	50.1553	153	144.788	253	239.421	353	334.053	453	428.686	553	523.319	653	617.951	753	712.584	853	807.216	953	901.849
54	51.1016	154	145.734	254	240.367	354	335.000	454	429.632	554	524.265	654	618.897	754	713.530	854	808.163	954	902.795
55	52.0480	155	146.681	255	241.313	355	335.946	455	430.579	555	525.211	655	619.844	755	714.476	855	809.109	955	903.742
56	52.9943	156	147.627	256	242.260	356	336.892	456	431.525	556	526.158	656	620.790	756	715.423	856	810.055	956	904.688
57	53.9406	157	148.573	257	243.206	357	337.839	457	432.471	557	527.104	657	621.736	757	716.369	857	811.002	957	905.634
58	54.8869	158	149.520	258	244.152	358	338.785	458	433.418	558	528.050	658	622.683	758	717.315	858	811.948	958	906.581
59	55.8333	159	150.466	259	245.099	359	339.731	459	434.364	559	528.996	659	623.629	759	718.262	859	812.894	959	907.527
60	56.7796	160	151.412	260	246.045	360	340.678	460	435.310	560	529.943	660	624.575	760	719.208	860	813.841	960	908.473
61	57.7259	161	152.359	261	246.991	361	341.624	461	436.256	561	530.889	661	625.522	761	720.154	861	814.787	961	909.420
62	58.6722	162	153.305	262	247.938	362	342.570	462	437.203	562	531.835	662	626.468	762	721.101	862	815.733	962	910.366
63	59.6186	163	154.251	263	248.884	363	343.517	463	438.149	563	532.782	663	627.414	763	722.047	863	816.680	963	911.312
64	60.5649	164	155.198	264	249.830	364	344.463	464	439.095	564	533.728	664	628.361	764	722.993	864	817.626	964	912.259
65	61.5112	165	156.144	265	250.777	365	345.409	465	440.042	565	534.674	665	629.307	765	723.940	865	818.572	965	913.205
66	62.4575	166	157.090	266	251.723	366	346.355	466	440.988	566	535.621	666	630.253	766	724.886	866	819.519	966	914.151
67	63.4039	167	158.037	267	252.669	367	347.302	467	441.934	567	536.567	667	631.200	767	725.832	867	820.465	967	915.098
68	64.3502	168	158.983	268	253.615	368	348.248	468	442.881	568	537.513	668	632.146	768	726.779	868	821.411	968	916.044
69	65.2965	169	159.929	269	254.562	369	349.194	469	443.827	569	538.460	669	633.092	769	727.725	869	822.358	969	916.990
70	66.2429	170	160.875	270	255.508	370	350.141	470	444.773	570	539.406	670	634.039	770	728.671	870	823.304	970	917.937
71	67.1892	171	161.822	271	256.454	371	351.087	471	445.720	571	540.352	671	634.985	771	729.618	871	824.250	971	918.883
72	68.1355	172	162.768	272	257.401	372	352.033	472	446.666	572	541.299	672	635.931	772	730.564	872	825.197	972	919.829
73	69.0818	173	163.714	273	258.347	373	352.980	473	447.612	573	542.245	673	636.878	773	731.510	873	826.143	973	920.776
74	70.0282	174	164.661	274	259.293	374	353.926	474	448.559	574	543.191	674	637.824	774	732.457	874	827.089	974	921.722
75	70.9745	175	165.607	275	260.240	375	354.872	475	449.505	575	544.138	675	638.770	775	733.403	875	828.036	975	922.668
76	71.9208	176	166.553	276	261.186	376	355.819	476	450.451	576	545.084	676	639.717	776	734.349	876	828.982	976	923.615
77	72.8671	177	167.500	277	262.132	377	356.765	477	451.398	577	546.030	677	640.663	777	735.296	877	829.928	977	924.561
78	73.8135	178	168.446	278	263.079	378	357.711	478	452.344	578	546.977	678	641.609	778	736.242	878	830.875	978	925.507
79	74.7598	179	169.392	279	264.025	379	358.658	479	453.290	579	547.923	679	642.556	779	737.188	879	831.821	979	926.454
80	75.7061	180	170.339	280	264.971	380	359.604	480	454.237	580	548.869	680	643.502	780	738.135	880	832.767	980	927.400
81	76.6524	181	171.285	281	265.918	381	360.550	481	455.183	581	549.816	681	644.448	781	739.081	881	833.714	981	928.346
82	77.5988	182	172.231	282	266.864	382	361.497	482	456.129	582	550.762	682	645.395	782	740.027	882	834.660	982	929.293
83	78.5451	183	173.178	283	267.810	383	362.443	483	457.076	583	551.708	683	646.341	783	740.974	883	835.606	983	930.239
84	79.4914	184	174.124	284	268.757	384	363.389	484	458.022	584	552.655	684	647.287	784	741.920	884	836.553	984	931.185
85	80.4377	185	175.070	285	269.703	385	364.336	485	458.968	585	553.601	685	648.234	785	742.866	885	837.499	985	932.132
86	81.3841	186	176.017	286	270.649	386	365.282	486	459.915	586	554.547	686	649.180	786	743.813	886	838.445	986	933.078
87	82.3304	187	176.963	287	271.596	387	366.228	487	460.861	587	555.494	687	650.126	787	744.759	887	839.392	987	934.024
88	83.2767	188	177.909	288	272.542	388	367.175	488	461.807	588	556.440	688	651.073	788	745.705	888	840.338	988	934.971
89	84.2231	189	178.856	289	273.488	389	368.121	489	462.754	589	557.386	689	652.019	789	746.652	889	841.284	989	935.917
90	85.1694	190	179.802	290	274.435	390	369.067	490	463.700	590	558.333	690	652.965	790	747.598	890	842.231	990	936.863
91	86.1157	191	180.748	291	275.381	391	370.014	491	464.646	591	559.279	691	653.912	791	748.544	891	843.177	991	937.810
92	87.0620	192	181.695	292	276.327	392	370.960	492	465.593	592	560.225	692	654.858	792	749.491	892	844.123	992	938.756
93	88.0084	193	182.641	293	277.274	393	371.906	493	466.539	593	561.172	693	655.804	793	750.437	893	845.070	993	939.702
94	88.9547	194	183.587	294	278.220	394	372.853	494	467.485	594	562.118	694	656.751	794	751.383	894	846.016	994	940.648
95	89.9010	195	184.534	295	279.166	395	373.799	495	468.432	595	563.064	695	657.697	795	752.330	895	846.962	995	941.595
96	90.8473	196	185.480	296	280.113	396	374.745	496	469.378	596	564.011	696	658.643	796	753.276	896	847.908	996	942.541
97	91.7937	197	186.426	297	281.059	397	375.692	497	470.324	597	564.957	697	659.590	797	754.222	897	848.855	997	943.487
98	92.7400	198	187.373	298	282.005	398	376.638	498	471.271	598	565.903	698	660.536	798	755.169	898	849.801	998	944.434
99	93.6863	199	188.319	299	282.952	399	377.584	499	472.217	599	566.850	699	661.482	799	756.115	899	850.747	999	945.380

9.12. CAPACITY—LITERS TO LIQUID QUARTS

[Reduction Factor: 1 liter = 1.056 718 liquid quarts]

Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts	Liters	Liquid Quarts
0		100	105.672	200	211.344	300	317.015	400	422.687	500	528.359	600	634.031	700	739.703	800	845.374	900	951.046
1	1.0567	101	106.729	201	212.400	301	318.072	401	423.744	501	529.416	601	635.088	701	740.759	801	846.431	901	952.103
2	2.1134	102	107.785	202	213.457	302	319.129	402	424.801	502	530.472	602	636.144	702	741.816	802	847.488	902	953.160
3	3.1702	103	108.842	203	214.514	303	320.186	403	425.857	503	531.529	603	637.201	703	742.873	803	848.545	903	954.216
4	4.2269	104	109.899	204	215.570	304	321.242	404	426.914	504	532.586	604	638.258	704	743.929	804	849.601	904	955.273
5	5.2836	105	110.955	205	216.627	305	322.299	405	427.971	505	533.643	605	639.314	705	744.986	805	850.658	905	956.330
6	6.3403	106	112.012	206	217.684	306	323.356	406	429.028	506	534.699	606	640.371	706	746.043	806	851.715	906	957.387
7	7.3970	107	113.069	207	218.741	307	324.412	407	430.084	507	535.756	607	641.428	707	747.100	807	852.771	907	958.443
8	8.4537	108	114.126	208	219.797	308	325.469	408	431.141	508	536.813	608	642.485	708	748.156	808	853.828	908	959.500
9	9.5105	109	115.182	209	220.854	309	326.526	409	432.198	509	537.869	609	643.541	709	749.213	809	854.885	909	960.557
10	10.5672	110	116.239	210	221.911	310	327.583	410	433.254	510	538.926	610	644.598	710	750.270	810	855.942	910	961.613
11	11.6239	111	117.296	211	222.967	311	328.639	411	434.311	511	539.983	611	645.655	711	751.326	811	856.998	911	962.670
12	12.6806	112	118.352	212	224.024	312	329.696	412	435.368	512	541.040	612	646.711	712	752.383	812	858.055	912	963.727
13	13.7373	113	119.409	213	225.081	313	330.753	413	436.425	513	542.096	613	647.768	713	753.440	813	859.112	913	964.784
14	14.7941	114	120.466	214	226.138	314	331.809	414	437.481	514	543.153	614	648.825	714	754.497	814	860.168	914	965.840
15	15.8508	115	121.523	215	227.194	315	332.866	415	438.538	515	544.210	615	649.882	715	755.553	815	861.225	915	966.897
16	16.9075	116	122.579	216	228.251	316	333.923	416	439.595	516	545.266	616	650.938	716	756.610	816	862.282	916	967.954
17	17.9642	117	123.636	217	229.308	317	334.980	417	440.651	517	546.323	617	651.995	717	757.667	817	863.339	917	969.010
18	19.0209	118	124.693	218	230.365	318	336.036	418	441.708	518	547.380	618	653.052	718	758.724	818	864.395	918	970.067
19	20.0776	119	125.749	219	231.421	319	337.093	419	442.765	519	548.437	619	654.108	719	759.780	819	865.452	919	971.124
20	21.1344	120	126.806	220	232.478	320	338.150	420	443.822	520	549.493	620	655.165	720	760.837	820	866.509	920	972.181
21	22.1911	121	127.863	221	233.535	321	339.206	421	444.878	521	550.550	621	656.222	721	761.894	821	867.565	921	973.237
22	23.2478	122	128.920	222	234.591	322	340.263	422	445.935	522	551.607	622	657.279	722	762.950	822	868.622	922	974.294
23	24.3045	123	129.976	223	235.648	323	341.320	423	446.992	523	552.664	623	658.335	723	764.007	823	869.679	923	975.351
24	25.3612	124	131.033	224	236.705	324	342.377	424	448.048	524	553.720	624	659.392	724	765.064	824	870.736	924	976.407
25	26.4180	125	132.090	225	237.762	325	343.433	425	449.105	525	554.777	625	660.449	725	766.121	825	871.792	925	977.464
26	27.4747	126	133.146	226	238.818	326	344.490	426	450.162	526	555.834	626	661.505	726	767.177	826	872.849	926	978.521
27	28.5314	127	134.203	227	239.875	327	345.547	427	451.219	527	556.890	627	662.562	727	768.234	827	873.906	927	979.578
28	29.5881	128	135.260	228	240.932	328	346.604	428	452.275	528	557.947	628	663.619	728	769.291	828	874.963	928	980.634
29	30.6448	129	136.317	229	241.988	329	347.660	429	453.332	529	559.004	629	664.676	729	770.347	829	876.019	929	981.691
30	31.7015	130	137.373	230	243.045	330	348.717	430	454.389	530	560.061	630	665.732	730	771.404	830	877.076	930	982.748
31	32.7583	131	138.430	231	244.102	331	349.774	431	455.445	531	561.117	631	666.789	731	772.461	831	878.133	931	983.804
32	33.8150	132	139.487	232	245.159	332	350.830	432	456.502	532	562.174	632	667.846	732	773.518	832	879.189	932	984.861
33	34.8717	133	140.543	233	246.215	333	351.887	433	457.559	533	563.231	633	668.902	733	774.574	833	880.246	933	985.918
34	35.9284	134	141.600	234	247.272	334	352.944	434	458.616	534	564.287	634	669.959	734	775.631	834	881.303	934	986.975
35	36.9851	135	142.657	235	248.329	335	354.001	435	459.672	535	565.344	635	671.016	735	776.688	835	882.360	935	988.031
36	38.0418	136	143.714	236	249.385	336	355.057	436	460.729	536	566.401	636	672.073	736	777.744	836	883.416	936	989.088
37	39.0986	137	144.770	237	250.442	337	356.114	437	461.786	537	567.458	637	673.129	737	778.801	837	884.473	937	990.145
38	40.1553	138	145.827	238	251.499	338	357.171	438	462.842	538	568.514	638	674.186	738	779.858	838	885.530	938	991.201
39	41.2120	139	146.884	239	252.556	339	358.227	439	463.899	539	569.571	639	675.243	739	780.915	839	886.586	939	992.258
40	42.2687	140	147.941	240	253.612	340	359.284	440	464.956	540	570.628	640	676.300	740	781.971	840	887.643	940	993.315
41	43.3254	141	148.997	241	254.669	341	360.341	441	466.013	541	571.684	641	677.356	741	783.028	841	888.700	941	994.372
42	44.3822	142	150.054	242	255.726	342	361.398	442	467.069	542	572.741	642	678.413	742	784.085	842	889.757	942	995.428
43	45.4389	143	151.111	243	256.782	343	362.454	443	468.126	543	573.798	643	679.470	743	785.141	843	890.813	943	996.485
44	46.4956	144	152.167	244	257.839	344	363.511	444	469.183	544	574.855	644	680.526	744	786.198	844	891.870	944	997.542
45	47.5523	145	153.224	245	258.896	345	364.568	445	470.240	545	575.911	645	681.583	745	787.255	845	892.927	945	998.599
46	48.6090	146	154.281	246	259.953	346	365.624	446	471.296	546	576.968	646	682.640	746	788.312	846	893.983	946	999.655
47	49.6657	147	155.338	247	261.009	347	366.681	447	472.353	547	578.025	647	683.697	747	789.368	847	895.040	947	1000.712
48	50.7225	148	156.394	248	262.066	348	367.738	448	473.410	548	579.081	648	684.753	748	790.425	848	896.097	948	1001.769
49	51.7792	149	157.451	249	263.123	349	368.795	449	474.466	549	580.138	649	685.810	749	791.482	849	897.154	949	1002.825

50	52.8359	150	158.508	250	264.180	350	369.851	450	475.523	550	581.195	650	686.867	750	792.539	850	898.210	950	1003.882
51	53.8926	151	159.564	251	265.236	351	370.908	451	476.580	551	582.252	651	687.923	751	793.595	851	899.267	951	1004.939
52	54.9493	152	160.621	252	266.293	352	371.965	452	477.637	552	583.308	652	688.980	752	794.652	852	900.324	952	1005.996
53	56.0061	153	161.678	253	267.350	353	373.021	453	478.693	553	584.365	653	690.037	753	795.709	853	901.380	953	1007.052
54	57.0628	154	162.735	254	268.406	354	374.078	454	479.750	554	585.422	654	691.094	754	796.765	854	902.437	954	1008.109
55	58.1195	155	163.791	255	269.463	355	375.135	455	480.807	555	586.478	655	692.150	755	797.822	855	903.494	955	1009.166
56	59.1762	156	164.848	256	270.520	356	376.192	456	481.863	556	587.535	656	693.207	756	798.879	856	904.551	956	1010.222
57	60.2329	157	165.905	257	271.577	357	377.248	457	482.920	557	588.592	657	694.264	757	799.936	857	905.607	957	1011.279
58	61.2896	158	166.961	258	272.633	358	378.305	458	483.977	558	589.649	658	695.320	758	800.992	858	906.664	958	1012.336
59	62.3464	159	168.018	259	273.690	359	379.362	459	485.034	559	590.705	659	696.377	759	802.049	859	907.721	959	1013.393
60	63.4031	160	169.075	260	274.747	360	380.418	460	486.090	560	591.762	660	697.434	760	803.106	860	908.777	960	1014.449
61	64.4598	161	170.132	261	275.803	361	381.475	461	487.147	561	592.819	661	698.491	761	804.162	861	909.834	961	1015.506
62	65.5165	162	171.188	262	276.860	362	382.532	462	488.204	562	593.876	662	699.547	762	805.219	862	910.891	962	1016.563
63	66.5732	163	172.245	263	277.917	363	383.589	463	489.260	563	594.932	663	700.604	763	806.276	863	911.948	963	1017.619
64	67.6300	164	173.302	264	278.974	364	384.645	464	490.317	564	595.989	664	701.661	764	807.333	864	913.004	964	1018.676
65	68.6867	165	174.358	265	280.030	365	385.702	465	491.374	565	597.046	665	702.717	765	808.389	865	914.061	965	1019.733
66	69.7434	166	175.415	266	281.087	366	386.759	466	492.431	566	598.102	666	703.774	766	809.446	866	915.118	966	1020.790
67	70.8001	167	176.472	267	282.144	367	387.816	467	493.487	567	599.159	667	704.831	767	810.503	867	916.175	967	1021.846
68	71.8568	168	177.529	268	283.200	368	388.872	468	494.544	568	600.216	668	705.888	768	811.559	868	917.231	968	1022.903
69	72.9135	169	178.585	269	284.257	369	389.929	469	495.601	569	601.273	669	706.944	769	812.616	869	918.288	969	1023.960
70	73.9703	170	179.642	270	285.314	370	390.986	470	496.657	570	602.329	670	708.001	770	813.673	870	919.345	970	1025.016
71	75.0270	171	180.699	271	286.371	371	392.042	471	497.714	571	603.386	671	709.058	771	814.730	871	920.401	971	1026.073
72	76.0837	172	181.755	272	287.427	372	393.099	472	498.771	572	604.443	672	710.114	772	815.786	872	921.458	972	1027.130
73	77.1404	173	182.812	273	288.484	373	394.156	473	499.828	573	605.499	673	711.171	773	816.843	873	922.515	973	1028.187
74	78.1971	174	183.869	274	289.541	374	395.213	474	500.884	574	606.556	674	712.228	774	817.900	874	923.572	974	1029.243
75	79.2539	175	184.926	275	290.597	375	396.269	475	501.941	575	607.613	675	713.285	775	818.956	875	924.628	975	1030.300
76	80.3106	176	185.982	276	291.654	376	397.326	476	502.998	576	608.670	676	714.341	776	820.013	876	925.685	976	1031.357
77	81.3673	177	187.039	277	292.711	377	398.383	477	504.054	577	609.726	677	715.398	777	821.070	877	926.742	977	1032.413
78	82.4240	178	188.096	278	293.768	378	399.439	478	505.111	578	610.783	678	716.455	778	822.127	878	927.798	978	1033.470
79	83.4807	179	189.153	279	294.824	379	400.496	479	506.168	579	611.840	679	717.512	779	823.183	879	928.855	979	1034.527
80	84.5374	180	190.209	280	295.881	380	401.553	480	507.225	580	612.896	680	718.568	780	824.240	880	929.912	980	1035.584
81	85.5942	181	191.266	281	296.938	381	402.610	481	508.281	581	613.953	681	719.625	781	825.297	881	930.969	981	1036.640
82	86.6509	182	192.323	282	297.994	382	403.666	482	509.338	582	615.010	682	720.682	782	826.353	882	932.025	982	1037.697
83	87.7076	183	193.379	283	299.051	383	404.723	483	510.395	583	616.067	683	721.738	783	827.410	883	933.082	983	1038.754
84	88.7643	184	194.436	284	300.108	384	405.780	484	511.452	584	617.123	684	722.795	784	828.467	884	934.139	984	1039.811
85	89.8210	185	195.493	285	301.165	385	406.836	485	512.508	585	618.180	685	723.852	785	829.524	885	935.195	985	1040.867
86	90.8777	186	196.550	286	302.221	386	407.893	486	513.565	586	619.237	686	724.909	786	830.580	886	936.252	986	1041.924
87	91.9345	187	197.606	287	303.278	387	408.950	487	514.622	587	620.293	687	725.965	787	831.637	887	937.309	987	1042.981
88	92.9912	188	198.663	288	304.335	388	410.007	488	515.678	588	621.350	688	727.022	788	832.694	888	938.366	988	1044.037
89	94.0479	189	199.720	289	305.392	389	411.063	489	516.735	589	622.407	689	728.079	789	833.751	889	939.422	989	1045.094
90	95.1046	190	200.776	290	306.448	390	412.120	490	517.792	590	623.464	690	729.135	790	834.807	890	940.479	990	1046.151
91	96.1613	191	201.833	291	307.505	391	413.177	491	518.849	591	624.520	691	730.192	791	835.864	891	941.536	991	1047.208
92	97.2181	192	202.890	292	308.562	392	414.233	492	519.905	592	625.577	692	731.249	792	836.921	892	942.592	992	1048.264
93	98.2748	193	203.947	293	309.618	393	415.290	493	520.962	593	626.634	693	732.306	793	837.977	893	943.649	993	1049.321
94	99.3315	194	205.003	294	310.675	394	416.347	494	522.019	594	627.690	694	733.362	794	839.034	894	944.706	994	1050.378
95	100.3882	195	206.060	295	311.732	395	417.404	495	523.075	595	628.747	695	734.419	795	840.091	895	945.763	995	1051.434
96	101.4449	196	207.117	296	312.789	396	418.460	496	524.132	596	629.804	696	735.476	796	841.148	896	946.819	996	1052.491
97	102.5016	197	208.173	297	313.845	397	419.517	497	525.189	597	630.861	697	736.532	797	842.204	897	947.876	997	1053.548
98	103.5584	198	209.230	298	314.902	398	420.574	498	526.246	598	631.917	698	737.589	798	843.261	898	948.933	998	1054.605
99	104.6151	199	210.287	299	315.959	399	421.630	499	527.302	599	632.974	699	738.646	799	844.318	899	949.989	999	1055.661

9.13. CAPACITY—GALLONS TO LITERS

[Reduction Factor: 1 gallon = 3.785 3058 liters]

Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters
0		100	378.531	200	757.061	300	1135.592	400	1514.122	500	1892.653	600	2271.183	700	2649.714	800	3028.245	900	3406.775
1	3.7853	101	382.316	201	760.846	301	1139.377	401	1517.908	501	1896.438	601	2274.969	701	2653.499	801	3032.030	901	3410.561
2	7.5706	102	386.101	202	764.632	302	1143.162	402	1521.693	502	1900.224	602	2278.754	702	2657.285	802	3035.815	902	3414.346
3	11.3559	103	389.886	203	768.417	303	1146.948	403	1525.478	503	1904.009	603	2282.539	703	2661.070	803	3039.601	903	3418.131
4	15.1412	104	393.672	204	772.202	304	1150.733	404	1529.264	504	1907.794	604	2286.325	704	2664.855	804	3043.386	904	3421.916
5	18.9265	105	397.457	205	775.988	305	1154.518	405	1533.049	505	1911.579	605	2290.110	705	2668.641	805	3047.171	905	3425.702
6	22.7118	106	401.242	206	779.773	306	1158.304	460	1536.834	506	1915.365	606	2293.895	706	2672.426	806	3050.956	906	3429.487
7	26.4971	107	405.028	207	783.558	307	1162.089	407	1540.619	507	1919.150	607	2297.681	707	2676.211	807	3054.742	907	3433.272
8	30.2824	108	408.813	208	787.344	308	1165.874	408	1544.405	508	1922.935	608	2301.466	708	2679.997	808	3058.527	908	3437.058
9	34.0678	109	412.598	209	791.129	309	1169.659	409	1548.190	509	1926.721	609	2305.251	709	2683.782	809	3062.312	909	3440.843
10	37.8531	110	416.384	210	794.914	310	1173.445	410	1551.975	510	1930.506	610	2309.037	710	2687.567	810	3066.098	910	3444.628
11	41.6384	111	420.169	211	798.700	311	1177.230	411	1555.761	511	1934.291	611	2312.822	711	2691.352	811	3069.883	911	3448.414
12	45.4237	112	423.954	212	802.485	312	1181.015	412	1559.546	512	1938.077	612	2316.607	712	2695.138	812	3073.668	912	3452.199
13	49.2090	113	427.740	213	806.270	313	1184.801	413	1563.331	513	1941.862	613	2320.392	713	2698.923	813	3077.454	913	3455.984
14	52.9943	114	431.525	214	810.055	314	1188.586	414	1567.117	514	1945.647	614	2324.178	714	2702.708	814	3081.239	914	3459.770
15	56.7796	115	435.310	215	813.841	315	1192.371	415	1570.902	515	1949.432	615	2327.963	715	2706.494	815	3085.024	915	3463.555
16	60.5649	116	439.095	216	817.626	316	1196.157	416	1574.687	516	1953.218	616	2331.748	716	2710.279	816	3088.810	916	3467.340
17	64.3502	117	442.881	217	821.411	317	1199.942	417	1578.473	517	1957.003	617	2335.534	717	2714.064	817	3092.595	917	3471.125
18	68.1355	118	446.666	218	825.197	318	1203.727	418	1582.258	518	1960.788	618	2339.319	718	2717.850	818	3096.380	918	3474.911
19	71.9208	119	450.451	219	828.982	319	1207.513	419	1586.043	519	1964.574	619	2343.104	719	2721.635	819	3100.165	919	3478.696
20	75.7061	120	454.237	220	832.767	320	1211.298	420	1589.828	520	1968.359	620	2346.890	720	2725.420	820	3103.951	920	3482.481
21	79.4914	121	458.022	221	836.553	321	1215.083	421	1593.614	521	1972.144	621	2350.675	721	2729.205	821	3107.736	921	3486.267
22	83.2767	122	461.807	222	840.338	322	1218.868	422	1597.399	522	1975.930	622	2354.460	722	2732.991	822	3111.521	922	3490.052
23	87.0620	123	465.593	223	844.123	323	1222.654	423	1601.184	523	1979.715	623	2358.246	723	2736.776	823	3115.307	923	3493.837
24	90.8473	124	469.378	224	847.908	324	1226.439	424	1604.970	524	1983.500	624	2362.031	724	2740.561	824	3119.092	924	3497.623
25	94.6326	125	473.163	225	851.694	325	1230.224	425	1608.755	525	1987.286	625	2365.816	725	2744.347	825	3122.877	925	3501.408
26	98.4180	126	476.949	226	855.479	326	1234.010	426	1612.540	526	1991.071	626	2369.601	726	2748.132	826	3126.663	926	3505.193
27	102.2033	127	480.734	227	859.264	327	1237.795	427	1616.326	527	1994.856	627	2373.387	727	2751.917	827	3130.448	927	3508.978
28	105.9886	128	484.519	228	863.050	328	1241.580	428	1620.111	528	1998.641	628	2377.172	728	2755.703	828	3134.233	928	3512.764
29	109.7739	129	488.304	229	866.835	329	1245.366	429	1623.896	529	2002.427	629	2380.957	729	2759.488	829	3138.019	929	3516.549
30	113.5592	130	492.090	230	870.620	330	1249.151	430	1627.681	530	2006.212	630	2384.743	730	2763.273	830	3141.804	930	3520.334
31	117.3445	131	495.875	231	874.406	331	1252.936	431	1631.467	531	2009.997	631	2388.528	731	2767.059	831	3145.589	931	3524.120
32	121.1298	132	499.660	232	878.191	332	1256.722	432	1635.252	532	2013.783	632	2392.313	732	2770.844	832	3149.374	932	3527.905
33	124.9151	133	503.446	233	881.976	333	1260.507	433	1639.037	533	2017.568	633	2396.099	733	2774.629	833	3153.160	933	3531.690
34	128.7004	134	507.231	234	885.762	334	1264.292	434	1642.823	534	2021.353	634	2399.884	734	2778.414	834	3156.945	934	3535.476
35	132.4857	135	511.016	235	889.547	335	1268.077	435	1646.608	535	2025.139	635	2403.669	735	2782.200	835	3160.730	935	3539.261
36	136.2710	136	514.802	236	893.332	336	1271.863	436	1650.393	536	2028.924	636	2407.454	736	2785.985	836	3164.516	936	3543.046
37	140.0563	137	518.587	237	897.117	337	1275.648	437	1654.179	537	2032.709	637	2411.240	737	2789.770	837	3168.301	937	3546.832
38	143.8416	138	522.372	238	900.903	338	1279.433	438	1657.964	538	2036.495	638	2415.025	738	2793.556	838	3172.086	938	3550.617
39	147.6269	139	526.158	239	904.688	339	1283.219	439	1661.749	539	2040.280	639	2418.810	739	2797.341	839	3175.872	939	3554.402
40	151.4122	140	529.943	240	908.473	340	1287.004	440	1665.535	540	2044.065	640	2422.596	740	2801.126	840	3179.657	940	3558.187
41	155.1975	141	533.728	241	912.259	341	1290.789	441	1669.320	541	2047.850	641	2426.381	741	2804.912	841	3183.442	941	3561.973
42	158.9828	142	537.513	242	916.044	342	1294.575	442	1673.105	542	2051.636	642	2430.166	742	2808.697	842	3187.227	942	3565.758
43	162.7681	143	541.299	243	919.829	343	1298.360	443	1676.890	543	2055.421	643	2433.952	743	2812.482	843	3191.013	943	3569.543
44	166.5535	144	545.084	244	923.615	344	1302.145	444	1680.676	544	2059.206	644	2437.737	744	2816.268	844	3194.798	944	3573.329
45	170.3388	145	548.869	245	927.400	345	1305.931	445	1684.461	545	2062.992	645	2441.522	745	2820.053	845	3198.583	945	3577.114
46	174.1241	146	552.655	246	931.185	346	1309.716	446	1688.246	546	2066.777	646	2445.308	746	2823.838	846	3202.369	946	3580.899
47	177.9094	147	556.440	247	934.971	347	1313.501	447	1692.032	547	2070.562	647	2449.093	747	2827.623	847	3206.154	947	3584.685
48	181.6947	148	560.225	248	938.756	348	1317.286	448	1695.817	548	2074.348	648	2452.878	748	2831.409	848	3209.939	948	3588.470
49	185.4800	149	564.011	249	942.541	349	1321.072	449	1699.602	549	2078.133	649	2456.663	749	2835.194	849	3213.725	949	3592.255

50	189.2653	150	567.796	250	946.326	350	1324.857	450	1703.388	550	2081.918	650	2460.449	750	2838.979	850	3217.510	950	3596.041
51	193.0506	151	571.581	251	950.112	351	1328.642	451	1707.173	551	2085.703	651	2464.234	751	2842.765	851	3221.295	951	3599.826
52	196.8359	152	575.366	252	953.897	352	1332.428	452	1710.958	552	2089.489	652	2468.019	752	2846.550	852	3225.081	952	3603.611
53	200.6212	153	579.152	253	957.682	353	1336.213	453	1714.744	553	2093.274	653	2471.805	753	2850.335	853	3228.866	953	3607.396
54	204.4065	154	582.937	254	961.468	354	1339.998	454	1718.529	554	2097.059	654	2475.590	754	2854.121	854	3232.651	954	3611.182
55	208.1918	155	586.722	255	965.253	355	1343.784	455	1722.314	555	2100.845	655	2479.375	755	2857.906	855	3236.436	955	3614.967
56	211.9771	156	590.508	256	969.038	356	1347.569	456	1726.099	556	2104.630	656	2483.161	756	2861.691	856	3240.222	956	3618.752
57	215.7624	157	594.293	257	972.824	357	1351.354	457	1729.885	557	2108.415	657	2486.946	757	2865.476	857	3244.007	957	3622.538
58	219.5477	158	598.078	258	976.609	358	1355.139	458	1733.670	558	2112.201	658	2490.731	758	2869.262	858	3247.792	958	3626.323
59	223.3330	159	601.864	259	980.394	359	1358.925	459	1737.455	559	2115.986	659	2494.517	759	2873.047	859	3251.578	959	3630.108
60	227.1183	160	605.649	260	984.180	360	1362.710	460	1741.241	560	2119.771	660	2498.302	760	2876.832	860	3255.363	960	3633.894
61	230.9037	161	609.434	261	987.965	361	1366.495	461	1745.026	561	2123.557	661	2502.087	761	2880.618	861	3259.148	961	3637.679
62	234.6890	162	613.220	262	991.750	362	1370.281	462	1748.811	562	2127.342	662	2505.872	762	2884.403	862	3262.934	962	3641.464
63	238.4743	163	617.005	263	995.535	363	1374.066	463	1752.597	563	2131.127	663	2509.658	763	2888.188	863	3266.719	963	3645.249
64	242.2596	164	620.790	264	999.321	364	1377.851	464	1756.382	564	2134.912	664	2513.443	764	2891.974	864	3270.504	964	3649.035
65	246.0449	165	624.575	265	1003.106	365	1381.637	465	1760.167	565	2138.698	665	2517.228	765	2895.759	865	3274.290	965	3652.820
66	249.8302	166	628.361	266	1006.891	366	1385.422	466	1763.953	566	2142.483	666	2521.014	766	2899.544	866	3278.075	966	3656.605
67	253.6155	167	632.146	267	1010.677	367	1389.207	467	1767.738	567	2146.268	667	2524.799	767	2903.330	867	3281.860	967	3660.391
68	257.4008	168	635.931	268	1014.462	368	1392.993	468	1771.523	568	2150.054	668	2528.584	768	2907.115	868	3285.645	968	3664.176
69	261.1861	169	639.717	269	1018.247	369	1396.778	469	1775.308	569	2153.839	669	2532.370	769	2910.900	869	3289.431	969	3667.961
70	264.9714	170	643.502	270	1022.033	370	1400.563	470	1779.094	570	2157.624	670	2536.155	770	2914.685	870	3293.216	970	3671.747
71	268.7567	171	647.287	271	1025.818	371	1404.348	471	1782.879	571	2161.410	671	2539.940	771	2918.471	871	3297.001	971	3675.532
72	272.5420	172	651.073	272	1029.603	372	1408.134	472	1786.664	572	2165.195	672	2543.725	772	2922.256	872	3300.787	972	3679.317
73	276.3273	173	654.858	273	1033.388	373	1411.919	473	1790.450	573	2168.980	673	2547.511	773	2926.041	873	3304.572	973	3683.103
74	280.1126	174	658.643	274	1037.174	374	1415.704	474	1794.235	574	2172.766	674	2551.296	774	2929.827	874	3308.357	974	3686.888
75	283.8979	175	662.429	275	1040.959	375	1419.490	475	1798.020	575	2176.551	675	2555.081	775	2933.612	875	3312.143	975	3690.673
76	287.6832	176	666.214	276	1044.744	376	1423.275	476	1801.806	576	2180.336	676	2558.867	776	2937.397	876	3315.928	976	3694.458
77	291.4685	177	669.999	277	1048.530	377	1427.060	477	1805.591	577	2184.121	677	2562.652	777	2941.183	877	3319.713	977	3698.244
78	295.2539	178	673.784	278	1052.315	378	1430.846	478	1809.376	578	2187.907	678	2566.437	778	2944.968	878	3323.498	978	3702.029
79	299.0392	179	677.570	279	1056.100	379	1434.631	479	1813.161	579	2191.692	679	2570.223	779	2948.753	879	3327.284	979	3705.814
80	302.8245	180	681.355	280	1059.886	380	1438.416	480	1816.947	580	2195.477	680	2574.008	780	2952.539	880	3331.069	980	3709.600
81	306.6098	181	685.140	281	1063.671	381	1442.202	481	1820.732	581	2199.263	681	2577.793	781	2956.324	881	3334.854	981	3713.385
82	310.3951	182	688.926	282	1067.456	382	1445.987	482	1824.517	582	2203.048	682	2581.579	782	2960.109	882	3338.640	982	3717.170
83	314.1804	183	692.711	283	1071.242	383	1449.772	483	1828.303	583	2206.833	683	2585.364	783	2963.894	883	3342.425	983	3720.956
84	317.9657	184	696.496	284	1075.027	384	1453.557	484	1832.088	584	2210.619	684	2589.149	784	2967.680	884	3346.210	984	3724.741
85	321.7510	185	700.282	285	1078.812	385	1457.343	485	1835.873	585	2214.404	685	2592.934	785	2971.465	885	3349.996	985	3728.526
86	325.5363	186	704.067	286	1082.597	386	1461.128	486	1839.659	586	2218.189	686	2596.720	786	2975.250	886	3353.781	986	3732.312
87	329.3216	187	707.852	287	1086.383	387	1464.913	487	1843.444	587	2221.975	687	2600.505	787	2979.036	887	3357.566	987	3736.097
88	333.1069	188	711.637	288	1090.168	388	1468.699	488	1847.229	588	2225.760	688	2604.290	788	2982.821	888	3361.352	988	3739.882
89	336.8922	189	715.423	289	1093.953	389	1472.484	489	1851.015	589	2229.545	689	2608.076	789	2986.606	889	3365.137	989	3743.667
90	340.6775	190	719.208	290	1097.739	390	1476.269	490	1854.800	590	2233.330	690	2611.861	790	2990.392	890	3368.922	990	3747.453
91	344.4628	191	722.993	291	1101.524	391	1480.055	491	1858.585	591	2237.116	691	2615.646	791	2994.177	891	3372.707	991	3751.238
92	348.2481	192	726.779	292	1105.309	392	1483.840	492	1862.370	592	2240.901	692	2619.432	792	2997.962	892	3376.493	992	3755.023
93	352.0334	193	730.564	293	1109.095	393	1487.625	493	1866.156	593	2244.686	693	2623.217	793	3001.747	893	3380.278	993	3758.809
94	355.8187	194	734.349	294	1112.880	394	1491.410	494	1869.941	594	2248.472	694	2627.002	794	3005.533	894	3384.063	994	3762.594
95	359.6041	195	738.135	295	1116.665	395	1495.196	495	1873.726	595	2252.257	695	2630.788	795	3009.318	895	3387.849	995	3766.379
96	363.3894	196	741.920	296	1120.451	396	1498.981	496	1877.512	596	2256.042	696	2634.573	796	3013.103	896	3391.634	996	3770.165
97	367.1747	197	745.705	297	1124.236	397	1502.766	497	1881.297	597	2259.828	697	2638.358	797	3016.889	897	3395.419	997	3773.950
98	370.9600	198	749.491	298	1128.021	398	1506.552	498	1885.082	598	2263.613	698	2642.143	798	3020.674	898	3399.205	998	3777.735
99	374.7453	199	753.276	299	1131.806	399	1510.337	499	1888.868	599	2267.398	699	2645.929	799	3024.459	899	3402.990	999	3781.520

9.14. CAPACITY—LITERS TO GALLONS

[Reduction Factor: 1 liter = 0.264 179 45 gallon]

Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons	Liters	Gallons
0		100	26.4179	200	52.8359	300	79.2538	400	105.6718	500	132.0897	600	158.5077	700	184.9256	800	211.3436	900	237.7615
1	0.26418	101	26.6821	201	53.1001	301	79.5180	401	105.9360	501	132.3539	601	158.7718	701	185.1898	801	211.6077	901	238.0257
2	0.52836	102	26.9463	202	53.3642	302	79.7822	402	106.2001	502	132.6181	602	159.0360	702	185.4540	802	211.8719	902	238.2899
3	0.79254	103	27.2105	203	53.6284	303	80.0464	403	106.4643	503	132.8823	603	159.3002	703	185.7182	803	212.1361	903	238.5540
4	1.05672	104	27.4747	204	53.8926	304	80.3106	404	106.7285	504	133.1464	604	159.5644	704	185.9823	804	212.4003	904	238.8182
5	1.32090	105	27.7388	205	54.1568	305	80.5747	405	106.9927	505	133.4106	605	159.8286	705	186.2465	805	212.6645	905	239.0824
6	1.58508	106	28.0030	206	54.4210	306	80.8389	406	107.2569	506	133.6748	606	160.0927	706	186.5107	806	212.9286	906	239.3466
7	1.84926	107	28.2672	207	54.6851	307	81.1031	407	107.5210	507	133.9390	607	160.3569	707	186.7749	807	213.1928	907	239.6108
8	2.11344	108	28.5314	208	54.9493	308	81.3673	408	107.7852	508	134.2032	608	160.6211	708	187.0391	808	213.4570	908	239.8749
9	2.37762	109	28.7956	209	55.2135	309	81.6315	409	108.0494	509	134.4673	609	160.8853	709	187.3032	809	213.7212	909	240.1391
10	2.64179	110	29.0597	210	55.4777	310	81.8956	410	108.3136	510	134.7315	610	161.1495	710	187.5674	810	213.9854	910	240.4033
11	2.90597	111	29.3239	211	55.7419	311	82.1598	411	108.5778	511	134.9957	611	161.4136	711	187.8316	811	214.2495	911	240.6675
12	3.17015	112	29.5881	212	56.0060	312	82.4240	412	108.8419	512	135.2599	612	161.6778	712	188.0958	812	214.5137	912	240.9317
13	3.43433	113	29.8523	213	56.2702	313	82.6882	413	109.1061	513	135.5241	613	161.9420	713	188.3599	813	214.7779	913	241.1958
14	3.69851	114	30.1165	214	56.5344	314	82.9523	414	109.3703	514	135.7882	614	162.2062	714	188.6241	814	215.0421	914	241.4600
15	3.96269	115	30.3806	215	56.7986	315	83.2165	415	109.6345	515	136.0524	615	162.4704	715	188.8883	815	215.3063	915	241.7242
16	4.22687	116	30.6448	216	57.0628	316	83.4807	416	109.8987	516	136.3166	616	162.7345	716	189.1525	816	215.5704	916	241.9884
17	4.49105	117	30.9090	217	57.3269	317	83.7449	417	110.1628	517	136.5808	617	162.9987	717	189.4167	817	215.8346	917	242.2526
18	4.75523	118	31.1732	218	57.5911	318	84.0091	418	110.4270	518	136.8450	618	163.2629	718	189.6808	818	216.0988	918	242.5167
19	5.01941	119	31.4374	219	57.8553	319	84.2732	419	110.6912	519	137.1091	619	163.5271	719	189.9450	819	216.3630	919	242.7809
20	5.28359	120	31.7015	220	58.1195	320	84.5374	420	110.9554	520	137.3733	620	163.7913	720	190.2092	820	216.6271	920	243.0451
21	5.54777	121	31.9657	221	58.3837	321	84.8016	421	111.2195	521	137.6375	621	164.0554	721	190.4734	821	216.8913	921	243.3093
22	5.81195	122	32.2299	222	58.6478	322	85.0658	422	111.4837	522	137.9017	622	164.3196	722	190.7376	822	217.1555	922	243.5735
23	6.07613	123	32.4941	223	58.9120	323	85.3300	423	111.7479	523	138.1659	623	164.5838	723	191.0017	823	217.4197	923	243.8376
24	6.34031	124	32.7583	224	59.1762	324	85.5941	424	112.0121	524	138.4300	624	164.8480	724	191.2659	824	217.6839	924	244.1018
25	6.60449	125	33.0224	225	59.4404	325	85.8583	425	112.2763	525	138.6942	625	165.1122	725	191.5301	825	217.9480	925	244.3660
26	6.86867	126	33.2866	226	59.7046	326	86.1225	426	112.5404	526	138.9584	626	165.3763	726	191.7943	826	218.2122	926	244.6302
27	7.13285	127	33.5508	227	59.9687	327	86.3867	427	112.8046	527	139.2226	627	165.6405	727	192.0585	827	218.4764	927	244.8944
28	7.39702	128	33.8150	228	60.2329	328	86.6509	428	113.0688	528	139.4867	628	165.9047	728	192.3226	828	218.7406	928	245.1585
29	7.66120	129	34.0791	229	60.4971	329	86.9150	429	113.3330	529	139.7509	629	166.1689	729	192.5868	829	219.0048	929	245.4227
30	7.92538	130	34.3433	230	60.7613	330	87.1792	430	113.5972	530	140.0151	630	166.4331	730	192.8510	830	219.2689	930	245.6869
31	8.18956	131	34.6075	231	61.0255	331	87.4434	431	113.8613	531	140.2793	631	166.6972	731	193.1152	831	219.5331	931	245.9511
32	8.45374	132	34.8717	232	61.2896	332	87.7076	432	114.1255	532	140.5435	632	166.9614	732	193.3794	832	219.7973	932	246.2152
33	8.71792	133	35.1359	233	61.5538	333	87.9718	433	114.3897	533	140.8076	633	167.2256	733	193.6435	833	220.0615	933	246.4794
34	8.98210	134	35.4000	234	61.8180	334	88.2359	434	114.6539	534	141.0718	634	167.4898	734	193.9077	834	220.3257	934	246.7436
35	9.24628	135	35.6642	235	62.0822	335	88.5001	435	114.9181	535	141.3360	635	167.7540	735	194.1719	835	220.5898	935	247.0078
36	9.51046	136	35.9284	236	62.3464	336	88.7643	436	115.1822	536	141.6002	636	168.0181	736	194.4361	836	220.8540	936	247.2720
37	9.77464	137	36.1926	237	62.6105	337	89.0285	437	115.4464	537	141.8644	637	168.2823	737	194.7003	837	221.1182	937	247.5361
38	10.03882	138	36.4568	238	62.8747	338	89.2927	438	115.7106	538	142.1285	638	168.5465	738	194.9644	838	221.3824	938	247.8003
39	10.30300	139	36.7209	239	63.1389	339	89.5568	439	115.9748	539	142.3927	639	168.8107	739	195.2286	839	221.6466	939	248.0645
40	10.56718	140	36.9851	240	63.4031	340	89.8210	440	116.2390	540	142.6569	640	169.0748	740	195.4928	840	221.9107	940	248.3287
41	10.83136	141	37.2493	241	63.6672	341	90.0852	441	116.5031	541	142.9211	641	169.3390	741	195.7570	841	222.1749	941	248.5929
42	11.09554	142	37.5135	242	63.9314	342	90.3494	442	116.7673	542	143.1853	642	169.6032	742	196.0212	842	222.4391	942	248.8570
43	11.35972	143	37.7777	243	64.1956	343	90.6136	443	117.0315	543	143.4494	643	169.8674	743	196.2853	843	222.7033	943	249.1212
44	11.62390	144	38.0418	244	64.4598	344	90.8777	444	117.2957	544	143.7136	644	170.1316	744	196.5495	844	222.9675	944	249.3854
45	11.88808	145	38.3060	245	64.7240	345	91.1419	445	117.5599	545	143.9778	645	170.3957	745	196.8137	845	223.2316	945	249.6496
46	12.15225	146	38.5702	246	64.9881	346	91.4061	446	117.8240	546	144.2420	646	170.6599	746	197.0779	846	223.4958	946	249.9138
47	12.41643	147	38.8344	247	65.2523	347	91.6703	447	118.0882	547	144.5062	647	170.9241	747	197.3420	847	223.7600	947	250.1779
48	12.68061	148	39.0986	248	65.5165	348	91.9344	448	118.3524	548	144.7703	648	171.1883	748	197.6062	848	224.0242	948	250.4421
49	12.94479	149	39.3627	249	65.7807	349	92.1986	449	118.6166	549	145.0345	649	171.4525	749	197.8704	849	224.2884	949	250.7063

50	13.20897	150	39.6269	250	66.0449	350	92.4628	450	118.8808	550	145.2987	650	171.7166	750	198.1346	850	224.5525	950	250.9705
51	13.47315	151	39.8911	251	66.3090	351	92.7270	451	119.1449	551	145.5629	651	171.9808	751	198.3988	851	224.8167	951	251.2347
52	13.73733	152	40.1553	252	66.5732	352	92.9912	452	119.4091	552	145.8271	652	172.2450	752	198.6629	852	225.0809	952	251.4988
53	14.00151	153	40.4195	253	66.8374	353	93.2553	453	119.6733	553	146.0912	653	172.5092	753	198.9271	853	225.3451	953	251.7630
54	14.26569	154	40.6836	254	67.1016	354	93.5195	454	119.9375	554	146.3554	654	172.7734	754	199.1913	854	225.6093	954	252.0272
55	14.52987	155	40.9478	255	67.3658	355	93.7837	455	120.2016	555	146.6196	655	173.0375	755	199.4555	855	225.8734	955	252.2914
56	14.79405	156	41.2120	256	67.6299	356	94.0479	456	120.4658	556	146.8838	656	173.3017	756	199.7197	856	226.1376	956	252.5556
57	15.05823	157	41.4762	257	67.8941	357	94.3121	457	120.7300	557	147.1480	657	173.5659	757	199.9838	857	226.4018	957	252.8197
58	15.32241	158	41.7404	258	68.1583	358	94.5762	458	120.9942	558	147.4121	658	173.8301	758	200.2480	858	226.6660	958	253.0839
59	15.58659	159	42.0045	259	68.4225	359	94.8404	459	121.2584	559	147.6763	659	174.0943	759	200.5122	859	226.9301	959	253.3481
60	15.85077	160	42.2687	260	68.6867	360	95.1046	460	121.5225	560	147.9405	660	174.3584	760	200.7764	860	227.1943	960	253.6123
61	16.11495	161	42.5329	261	68.9508	361	95.3688	461	121.7867	561	148.2047	661	174.6226	761	201.0406	861	227.4585	961	253.8765
62	16.37913	162	42.7971	262	69.2150	362	95.6330	462	122.0509	562	148.4689	662	174.8868	762	201.3047	862	227.7227	962	254.1406
63	16.64331	163	43.0613	263	69.4792	363	95.8971	463	122.3151	563	148.7330	663	175.1510	763	201.5689	863	227.9869	963	254.4048
64	16.90748	164	43.3254	264	69.7434	364	96.1613	464	122.5793	564	148.9972	664	175.4152	764	201.8331	864	228.2510	964	254.6690
65	17.17166	165	43.5896	265	70.0076	365	96.4255	465	122.8434	565	149.2614	665	175.6793	765	202.0973	865	228.5152	965	254.9332
66	17.43584	166	43.8538	266	70.2717	366	96.6897	466	123.1076	566	149.5256	666	175.9435	766	202.3615	866	228.7794	966	255.1973
67	17.70002	167	44.1180	267	70.5359	367	96.9539	467	123.3718	567	149.7897	667	176.2077	767	202.6256	867	229.0436	967	255.4615
68	17.96420	168	44.3821	268	70.8001	368	97.2180	468	123.6360	568	150.0539	668	176.4719	768	202.8898	868	229.3078	968	255.7257
69	18.22838	169	44.6463	269	71.0643	369	97.4822	469	123.9002	569	150.3181	669	176.7361	769	203.1540	869	229.5719	969	255.9899
70	18.49256	170	44.9105	270	71.3285	370	97.7464	470	124.1643	570	150.5823	670	177.0002	770	203.4182	870	229.8361	970	256.2541
71	18.75674	171	45.1747	271	71.5926	371	98.0106	471	124.4285	571	150.8465	671	177.2644	771	203.6824	871	230.1003	971	256.5182
72	19.02092	172	45.4389	272	71.8568	372	98.2748	472	124.6927	572	151.1106	672	177.5286	772	203.9465	872	230.3645	972	256.7824
73	19.28510	173	45.7030	273	72.1210	373	98.5389	473	124.9569	573	151.3748	673	177.7928	773	204.2107	873	230.6287	973	257.0466
74	19.54928	174	45.9672	274	72.3852	374	98.8031	474	125.2211	574	151.6390	674	178.0569	774	204.4749	874	230.8928	974	257.3108
75	19.81346	175	46.2314	275	72.6493	375	99.0673	475	125.4852	575	151.9032	675	178.3211	775	204.7391	875	231.1570	975	257.5750
76	20.07764	176	46.4956	276	72.9135	376	99.3315	476	125.7494	576	152.1674	676	178.5853	776	205.0033	876	231.4212	976	257.8391
77	20.34182	177	46.7598	277	73.1777	377	99.5957	477	126.0136	577	152.4315	677	178.8495	777	205.2674	877	231.6854	977	258.1033
78	20.60600	178	47.0239	278	73.4419	378	99.8598	478	126.2778	578	152.6957	678	179.1137	778	205.5316	878	231.9496	978	258.3675
79	20.87018	179	47.2881	279	73.7061	379	100.1240	479	126.5420	579	152.9599	679	179.3778	779	205.7958	879	232.2137	979	258.6317
80	21.13436	180	47.5523	280	73.9702	380	100.3882	480	126.8061	580	153.2241	680	179.6420	780	206.0600	880	232.4779	980	258.8959
81	21.39854	181	47.8165	281	74.2344	381	100.6524	481	127.0703	581	153.4883	681	179.9062	781	206.3242	881	232.7421	981	259.1600
82	21.66271	182	48.0807	282	74.4986	382	100.9165	482	127.3345	582	153.7524	682	180.1704	782	206.5883	882	233.0063	982	259.4242
83	21.92689	183	48.3448	283	74.7628	383	101.1807	483	127.5987	583	154.0166	683	180.4346	783	206.8525	883	233.2705	983	259.6884
84	22.19107	184	48.6090	284	75.0270	384	101.4449	484	127.8629	584	154.2808	684	180.6987	784	207.1167	884	233.5346	984	259.9526
85	22.45525	185	48.8732	285	75.2911	385	101.7091	485	128.1270	585	154.5450	685	180.9629	785	207.3809	885	233.7988	985	260.2168
86	22.71943	186	49.1374	286	75.5553	386	101.9733	486	128.3912	586	154.8092	686	181.2271	786	207.6450	886	234.0630	986	260.4809
87	22.98361	187	49.4016	287	75.8195	387	102.2374	487	128.6554	587	155.0733	687	181.4913	787	207.9092	887	234.3272	987	260.7451
88	23.24779	188	49.6657	288	76.0837	388	102.5016	488	128.9196	588	155.3375	688	181.7555	788	208.1734	888	234.5914	988	261.0093
89	23.51197	189	49.9299	289	76.3479	389	102.7658	489	129.1838	589	155.6017	689	182.0196	789	208.4376	889	234.8555	989	261.2735
90	23.77615	190	50.1941	290	76.6120	390	103.0300	490	129.4479	590	155.8659	690	182.2838	790	208.7018	890	235.1197	990	261.5377
91	24.04033	191	50.4583	291	76.8762	391	103.2942	491	129.7121	591	156.1301	691	182.5480	791	208.9659	891	235.3839	991	261.8018
92	24.30451	192	50.7225	292	77.1404	392	103.5583	492	129.9763	592	156.3942	692	182.8122	792	209.2301	892	235.6481	992	262.0660
93	24.56869	193	50.9866	293	77.4046	393	103.8225	493	130.2405	593	156.6584	693	183.0764	793	209.4943	893	235.9122	993	262.3302
94	24.83287	194	51.2508	294	77.6688	394	104.0867	494	130.5046	594	156.9226	694	183.3405	794	209.7585	894	236.1764	994	262.5944
95	25.09705	195	51.5150	295	77.9329	395	104.3509	495	130.7688	595	157.1868	695	183.6047	795	210.0227	895	236.4406	995	262.8586
96	25.36123	196	51.7792	296	78.1971	396	104.6151	496	131.0330	596	157.4510	696	183.8689	796	210.2868	896	236.7048	996	263.1227
97	25.62541	197	52.0434	297	78.4613	397	104.8792	497	131.2972	597	157.7151	697	184.1331	797	210.5510	897	236.9690	997	263.3869
98	25.88959	198	52.3075	298	78.7255	398	105.1434	498	131.5614	598	157.9793	698	184.3973	798	210.8152	898	237.2331	998	263.6511
99	26.15377	199	52.5717	299	78.9897	399	105.4076	499	131.8255	599	158.2435	699	184.6614	799	211.0794	899	237.4973	999	263.9153

9.15. MASS—AVOIRDUPOIS POUNDS TO KILOGRAMS

[Reduction Factor: 1 avoirdupois pound = 0.453 592 37 kilogram]

Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos
0		100	45.35924	200	90.71847	300	136.07771	400	181.43695	500	226.79619	600	272.15542	700	317.51466	800	362.87390	900	408.23313
1	0.45359	101	45.81283	201	91.17207	301	136.53130	401	181.89054	501	227.24978	601	272.60901	701	317.96825	801	363.32749	901	408.68673
2	0.90718	102	46.26642	202	91.62566	302	136.98490	402	182.34413	502	227.70337	602	273.06261	702	318.42184	802	363.78108	902	409.14032
3	1.36078	103	46.72001	203	92.07925	303	137.43849	403	182.79773	503	228.15696	603	273.51620	703	318.87544	803	364.23467	903	409.59391
4	1.81437	104	47.17361	204	92.53284	304	137.89208	404	183.25132	504	228.61055	604	273.96979	704	319.32903	804	364.68827	904	410.04750
5	2.26796	105	47.62720	205	92.98644	305	138.34567	405	183.70491	505	229.06415	605	274.42338	705	319.78262	805	365.14186	905	410.50109
6	2.72155	106	48.08079	206	93.44003	306	138.79927	406	184.15850	506	229.51774	606	274.87698	706	320.23621	806	365.59545	906	410.95469
7	3.17515	107	48.53438	207	93.89362	307	139.25286	407	184.61209	507	229.97133	607	275.33057	707	320.68981	807	366.04904	907	411.40828
8	3.62874	108	48.98798	208	94.34721	308	139.70645	408	185.06569	508	230.42492	608	275.78416	708	321.14340	808	366.50263	908	411.86187
9	4.08233	109	49.44157	209	94.80081	309	140.16004	409	185.51928	509	230.87852	609	276.23775	709	321.59699	809	366.95623	909	412.31546
10	4.53592	110	49.89516	210	95.25440	310	140.61363	410	185.97287	510	231.33211	610	276.69135	710	322.05058	810	367.40982	910	412.76906
11	4.98952	111	50.34875	211	95.70799	311	141.06723	411	186.42646	511	231.78570	611	277.14494	711	322.50418	811	367.86341	911	413.22265
12	5.44311	112	50.80235	212	96.16158	312	141.52082	412	186.88006	512	232.23929	612	277.59853	712	322.95777	812	368.31700	912	413.67624
13	5.89670	113	51.25594	213	96.61517	313	141.97441	413	187.33365	513	232.69289	613	278.05212	713	323.41136	813	368.77060	913	414.12983
14	6.35029	114	51.70953	214	97.06877	314	142.42800	414	187.78724	514	233.14648	614	278.50572	714	323.86495	814	369.22419	914	414.58343
15	6.80389	115	52.16312	215	97.52236	315	142.88160	415	188.24083	515	233.60007	615	278.95931	715	324.31854	815	369.67778	915	415.03702
16	7.25748	116	52.61671	216	97.97595	316	143.33519	416	188.69443	516	234.05366	616	279.41290	716	324.77214	816	370.13137	916	415.49061
17	7.71107	117	53.07031	217	98.42954	317	143.78878	417	189.14802	517	234.50726	617	279.86649	717	325.22573	817	370.58497	917	415.94420
18	8.16466	118	53.52390	218	98.88314	318	144.24237	418	189.60161	518	234.96085	618	280.32008	718	325.67932	818	371.03856	918	416.39780
19	8.61826	119	53.97749	219	99.33673	319	144.69597	419	190.05520	519	235.41444	619	280.77368	719	326.13291	819	371.49215	919	416.85139
20	9.07185	120	54.43108	220	99.79032	320	145.14956	420	190.50880	520	235.86803	620	281.22727	720	326.58651	820	371.94574	920	417.30498
21	9.52544	121	54.88468	221	100.24391	321	145.60315	421	190.96239	521	236.32162	621	281.68086	721	327.04010	821	372.39934	921	417.75857
22	9.97903	122	55.33827	222	100.69751	322	146.05674	422	191.41598	522	236.77522	622	282.13445	722	327.49369	822	372.85293	922	418.21217
23	10.43262	123	55.79186	223	101.15110	323	146.51034	423	191.86957	523	237.22881	623	282.58805	723	327.94728	823	373.30652	923	418.66576
24	10.88622	124	56.24545	224	101.60469	324	146.96393	424	192.32316	524	237.68240	624	283.04164	724	328.40088	824	373.76011	924	419.11935
25	11.33981	125	56.69905	225	102.05828	325	147.41752	425	192.77676	525	238.13599	625	283.49523	725	328.85447	825	374.21371	925	419.57294
26	11.79340	126	57.15264	226	102.51188	326	147.87111	426	193.23035	526	238.58959	626	283.94882	726	329.30806	826	374.66730	926	420.02653
27	12.24699	127	57.60623	227	102.96547	327	148.32470	427	193.68394	527	239.04318	627	284.40242	727	329.76165	827	375.12089	927	420.48013
28	12.70059	128	58.05982	228	103.41906	328	148.77830	428	194.13753	528	239.49677	628	284.85601	728	330.21525	828	375.57448	928	420.93372
29	13.15418	129	58.51342	229	103.87265	329	149.23189	429	194.59113	529	239.95036	629	285.30960	729	330.66884	829	376.02807	929	421.38731
30	13.60777	130	58.96701	230	104.32625	330	149.68548	430	195.04472	530	240.40396	630	285.76319	730	331.12243	830	376.48167	930	421.84090
31	14.06136	131	59.42060	231	104.77984	331	150.13907	431	195.49831	531	240.85755	631	286.21679	731	331.57602	831	376.93526	931	422.29450
32	14.51496	132	59.87419	232	105.23343	332	150.59267	432	195.95190	532	241.31114	632	286.67038	732	332.02961	832	377.38885	932	422.74809
33	14.96855	133	60.32779	233	105.68702	333	151.04626	433	196.40550	533	241.76473	633	287.12397	733	332.48321	833	377.84244	933	423.20168
34	15.42214	134	60.78138	234	106.14061	334	151.49985	434	196.85909	534	242.21833	634	287.57756	734	332.93680	834	378.29604	934	423.65527
35	15.87573	135	61.23497	235	106.59421	335	151.95344	435	197.31268	535	242.67192	635	288.03115	735	333.39039	835	378.74963	935	424.10887
36	16.32933	136	61.68856	236	107.04780	336	152.40704	436	197.76627	536	243.12551	636	288.48475	736	333.84398	836	379.20322	936	424.56246
37	16.78292	137	62.14215	237	107.50139	337	152.86063	437	198.21987	537	243.57910	637	288.93834	737	334.29758	837	379.65681	937	425.01605
38	17.23651	138	62.59575	238	107.95498	338	153.31422	438	198.67346	538	244.03270	638	289.39193	738	334.75117	838	380.11041	938	425.46964
39	17.69010	139	63.04934	239	108.40858	339	153.76781	439	199.12705	539	244.48629	639	289.84552	739	335.20476	839	380.56400	939	425.92324
40	18.14369	140	63.50293	240	108.86217	340	154.22141	440	199.58064	540	244.93988	640	290.29912	740	335.65835	840	381.01759	940	426.37683
41	18.59729	141	63.95652	241	109.31576	341	154.67500	441	200.03424	541	245.39347	641	290.75271	741	336.11195	841	381.47118	941	426.83042
42	19.05088	142	64.41012	242	109.76935	342	155.12859	442	200.48783	542	245.84706	642	291.20630	742	336.56554	842	381.92478	942	427.28401
43	19.50447	143	64.86371	243	110.22295	343	155.58218	443	200.94142	543	246.30066	643	291.65989	743	337.01913	843	382.37837	943	427.73760
44	19.95806	144	65.31730	244	110.67654	344	156.03578	444	201.39501	544	246.75425	644	292.11349	744	337.47272	844	382.83196	944	428.19120
45	20.41166	145	65.77089	245	111.13013	345	156.48937	445	201.84860	545	247.20784	645	292.56708	745	337.92632	845	383.28555	945	428.64479
46	20.86525	146	66.22449	246	111.58372	346	156.94296	446	202.30220	546	247.66143	646	293.02067	746	338.37991	846	383.73915	946	429.09838
47	21.31884	147	66.67808	247	112.03732	347	157.39655	447	202.75579	547	248.11503	647	293.47426	747	338.83350	847	384.19274	947	429.55197
48	21.77243	148	67.13167	248	112.49091	348	157.85014	448	203.20938	548	248.56862	648	293.92786	748	339.28709	848	384.64633	948	430.00557
49	22.22603	149	67.58526	249	112.94450	349	158.30374	449	203.66297	549	249.02221	649	294.38145	749	339.74069	849	385.09992	949	430.45916

50	22.67962	150	68.03886	250	113.39809	350	158.75733	450	204.11657	550	249.47580	650	294.83504	750	340.19428	850	385.55351	950	430.91275
51	23.13321	151	68.49245	251	113.85168	351	159.21092	451	204.57016	551	249.92940	651	295.28863	751	340.64787	851	386.00711	951	431.36634
52	23.58680	152	68.94604	252	114.30528	352	159.66451	452	205.02375	552	250.38299	652	295.74223	752	341.10146	852	386.46070	952	431.81994
53	24.04040	153	69.39963	253	114.75887	353	160.11811	453	205.47734	553	250.83658	653	296.19582	753	341.55505	853	386.91429	953	432.27353
54	24.49399	154	69.85322	254	115.21246	354	160.57170	454	205.93094	554	251.29017	654	296.64941	754	342.00865	854	387.36788	954	432.72712
55	24.94758	155	70.30682	255	115.66605	355	161.02529	455	206.38453	555	251.74377	655	297.10300	755	342.46224	855	387.82148	955	433.18071
56	25.40117	156	70.76041	256	116.11965	356	161.47888	456	206.83812	556	252.19736	656	297.55659	756	342.91583	856	388.27507	956	433.63431
57	25.85477	157	71.21400	257	116.57324	357	161.93248	457	207.29171	557	252.65095	657	298.01019	757	343.36942	857	388.72866	957	434.08790
58	26.30836	158	71.66759	258	117.02683	358	162.38607	458	207.74531	558	253.10454	658	298.46378	758	343.82302	858	389.18225	958	434.54149
59	26.76195	159	72.12119	259	117.48042	359	162.83966	459	208.19890	559	253.55813	659	298.91737	759	344.27661	859	389.63585	959	434.99508
60	27.21554	160	72.57478	260	117.93402	360	163.29325	460	208.65249	560	254.01173	660	299.37096	760	344.73020	860	390.08944	960	435.44868
61	27.66913	161	73.02837	261	118.38761	361	163.74685	461	209.10608	561	254.46532	661	299.82456	761	345.18379	861	390.54303	961	435.90227
62	28.12273	162	73.48196	262	118.84120	362	164.20044	462	209.55967	562	254.91891	662	300.27815	762	345.63739	862	390.99662	962	436.35586
63	28.57632	163	73.93556	263	119.29479	363	164.65403	463	210.01327	563	255.37250	663	300.73174	763	346.09098	863	391.45022	963	436.80945
64	29.02991	164	74.38915	264	119.74839	364	165.10762	464	210.46686	564	255.82610	664	301.18533	764	346.54457	864	391.90381	964	437.26304
65	29.48350	165	74.84274	265	120.20198	365	165.56122	465	210.92045	565	256.27969	665	301.63893	765	346.99816	865	392.35740	965	437.71664
66	29.93710	166	75.29633	266	120.65557	366	166.01481	466	211.37404	566	256.73328	666	302.09252	766	347.45176	866	392.81099	966	438.17023
67	30.39069	167	75.74993	267	121.10916	367	166.46840	467	211.82764	567	257.18687	667	302.54611	767	347.90535	867	393.26458	967	438.62382
68	30.84428	168	76.20352	268	121.56276	368	166.92199	468	212.28123	568	257.64047	668	302.99970	768	348.35894	868	393.71818	968	439.07741
69	31.29787	169	76.65711	269	122.01635	369	167.37558	469	212.73482	569	258.09406	669	303.45330	769	348.81253	869	394.17177	969	439.53101
70	31.75147	170	77.11070	270	122.46994	370	167.82918	470	213.18841	570	258.54765	670	303.90689	770	349.26612	870	394.62536	970	439.98460
71	32.20506	171	77.56430	271	122.92353	371	168.28277	471	213.64201	571	259.00124	671	304.36048	771	349.71972	871	395.07895	971	440.43819
72	32.65865	172	78.01789	272	123.37712	372	168.73636	472	214.09560	572	259.45484	672	304.81407	772	350.17331	872	395.53255	972	440.89178
73	33.11224	173	78.47148	273	123.83072	373	169.18995	473	214.54919	573	259.90843	673	305.26767	773	350.62690	873	395.98614	973	441.34538
74	33.56584	174	78.92507	274	124.28431	374	169.64355	474	215.00278	574	260.36202	674	305.72126	774	351.08049	874	396.43973	974	441.79897
75	34.01943	175	79.37866	275	124.73790	375	170.09714	475	215.45638	575	260.81561	675	306.17485	775	351.53409	875	396.89332	975	442.25256
76	34.47302	176	79.83226	276	125.19149	376	170.55073	476	215.90997	576	261.26921	676	306.62844	776	351.98768	876	397.34692	976	442.70615
77	34.92661	177	80.28585	277	125.64509	377	171.00432	477	216.36356	577	261.72280	677	307.08203	777	352.44127	877	397.80051	977	443.15975
78	35.38020	178	80.73944	278	126.09868	378	171.45792	478	216.81715	578	262.17639	678	307.53563	778	352.89486	878	398.25410	978	443.61334
79	35.83380	179	81.19303	279	126.55227	379	171.91151	479	217.27075	579	262.62998	679	307.98922	779	353.34846	879	398.70769	979	444.06693
80	36.28739	180	81.64663	280	127.00586	380	172.36510	480	217.72434	580	263.08357	680	308.44281	780	353.80205	880	399.16129	980	444.52052
81	36.74098	181	82.10022	281	127.45946	381	172.81869	481	218.17793	581	263.53717	681	308.89640	781	354.25564	881	399.61488	981	444.97411
82	37.19457	182	82.55381	282	127.91305	382	173.27229	482	218.63152	582	263.99076	682	309.35000	782	354.70923	882	400.06847	982	445.42771
83	37.64817	183	83.00740	283	128.36664	383	173.72588	483	219.08511	583	264.44435	683	309.80359	783	355.16283	883	400.52206	983	445.88130
84	38.10176	184	83.46100	284	128.82023	384	174.17947	484	219.53871	584	264.89794	684	310.25718	784	355.61642	884	400.97566	984	446.33489
85	38.55535	185	83.91459	285	129.27383	385	174.63306	485	219.99230	585	265.35154	685	310.71077	785	356.07001	885	401.42925	985	446.78848
86	39.00894	186	84.36818	286	129.72742	386	175.08665	486	220.44589	586	265.80513	686	311.16437	786	356.52360	886	401.88284	986	447.24208
87	39.46254	187	84.82177	287	130.18101	387	175.54025	487	220.89948	587	266.25872	687	311.61796	787	356.97720	887	402.33643	987	447.69567
88	39.91613	188	85.27537	288	130.63460	388	175.99384	488	221.35308	588	266.71231	688	312.07155	788	357.43079	888	402.79002	988	448.14926
89	40.36972	189	85.72896	289	131.08819	389	176.44743	489	221.80667	589	267.16591	689	312.52514	789	357.88438	889	403.24362	989	448.60285
90	40.82331	190	86.18255	290	131.54179	390	176.90102	490	222.26026	590	267.61950	690	312.97874	790	358.33797	890	403.69721	990	449.05645
91	41.27691	191	86.63614	291	131.99538	391	177.35462	491	222.71385	591	268.07309	691	313.43233	791	358.79156	891	404.15080	991	449.51004
92	41.73050	192	87.08974	292	132.44897	392	177.80821	492	223.16745	592	268.52668	692	313.88592	792	359.24516	892	404.60439	992	449.96363
93	42.18409	193	87.54333	293	132.90256	393	178.26180	493	223.62104	593	268.98028	693	314.33951	793	359.69875	893	405.05799	993	450.41722
94	42.63768	194	87.99692	294	133.35616	394	178.71539	494	224.07463	594	269.43387	694	314.79310	794	360.15234	894	405.51158	994	450.87082
95	43.09128	195	88.45051	295	133.80975	395	179.16899	495	224.52822	595	269.88746	695	315.24670	795	360.60593	895	405.96517	995	451.32441
96	43.54487	196	88.90410	296	134.26334	396	179.62258	496	224.98182	596	270.34105	696	315.70029	796	361.05953	896	406.41876	996	451.77800
97	43.99846	197	89.35770	297	134.71693	397	180.07617	497	225.43541	597	270.79464	697	316.15388	797	361.51312	897	406.87236	997	452.23159
98	44.45205	198	89.81129	298	135.17053	398	180.52976	498	225.88900	598	271.24824	698	316.60747	798	361.96671	898	407.32595	998	452.68519
99	44.90564	199	90.26488	299	135.62412	399	180.98336	499	226.34259	599	271.70183	699	317.06107	799	362.42030	899	407.77954	999	453.13878

9.16. MASS—KILOGRAMS TO AVOIRDUPOIS POUNDS

[Reduction Factor: 1 kilogram = 2.204 622 622 avoirdupois pounds]

Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds	Kilos	Pounds
0		100	220.4623	200	440.9245	300	661.3868	400	881.8490	500	1102.3113	600	1322.7736	700	1543.2358	800	1763.6981	900	1984.1604
1	2.2046	101	222.6669	201	443.1291	301	663.5914	401	884.0537	501	1104.5159	601	1324.9782	701	1545.4405	801	1765.9027	901	1986.3650
2	4.4092	102	224.8715	202	445.3338	302	665.7960	402	886.2583	502	1106.7206	602	1327.1828	702	1547.6451	802	1768.1073	902	1988.5696
3	6.6139	103	227.0761	203	447.5384	303	668.0007	403	888.4629	503	1108.9252	603	1329.3874	703	1549.8497	803	1770.3120	903	1990.7742
4	8.8185	104	229.2808	204	449.7430	304	670.2053	404	890.6675	504	1111.1298	604	1331.5921	704	1552.0543	804	1772.5166	904	1992.9789
5	11.0231	105	231.4854	205	451.9476	305	672.4099	405	892.8722	505	1113.3344	605	1333.7967	705	1554.2589	805	1774.7212	905	1995.1835
6	13.2277	106	233.6900	206	454.1523	306	674.6145	406	895.0768	506	1115.5390	606	1336.0013	706	1556.4636	806	1776.9258	906	1997.3881
7	15.4324	107	235.8946	207	456.3569	307	676.8191	407	897.2814	507	1117.7437	607	1338.2059	707	1558.6682	807	1779.1305	907	1999.5927
8	17.6370	108	238.0992	208	458.5615	308	679.0238	408	899.4860	508	1119.9483	608	1340.4106	708	1560.8728	808	1781.3351	908	2001.7973
9	19.8416	109	240.3039	209	460.7661	309	681.2284	409	901.6907	509	1122.1529	609	1342.6152	709	1563.0774	809	1783.5397	909	2004.0020
10	22.0462	110	242.5085	210	462.9708	310	683.4330	410	903.8953	510	1124.3575	610	1344.8198	710	1565.2821	810	1785.7443	910	2006.2066
11	24.2508	111	244.7131	211	465.1754	311	685.6376	411	906.0999	511	1126.5622	611	1347.0244	711	1567.4867	811	1787.9489	911	2008.4112
12	26.4555	112	246.9177	212	467.3800	312	687.8423	412	908.3045	512	1128.7668	612	1349.2290	712	1569.6913	812	1790.1536	912	2010.6158
13	28.6601	113	249.1224	213	469.5846	313	690.0469	413	910.5091	513	1130.9714	613	1351.4337	713	1571.8959	813	1792.3582	913	2012.8205
14	30.8647	114	251.3270	214	471.7892	314	692.2515	414	912.7138	514	1133.1760	614	1353.6383	714	1574.1006	814	1794.5628	914	2015.0251
15	33.0693	115	253.5316	215	473.9939	315	694.4561	415	914.9184	515	1135.3807	615	1355.8429	715	1576.3052	815	1796.7674	915	2017.2297
16	35.2740	116	255.7362	216	476.1985	316	696.6607	416	917.1230	516	1137.5853	616	1358.0475	716	1578.5098	816	1798.9721	916	2019.4343
17	37.4786	117	257.9408	217	478.4031	317	698.8654	417	919.3276	517	1139.7899	617	1360.2522	717	1580.7144	817	1801.1767	917	2021.6389
18	39.6832	118	260.1455	218	480.6077	318	701.0700	418	921.5323	518	1141.9945	618	1362.4568	718	1582.9190	818	1803.3813	918	2023.8436
19	41.8878	119	262.3501	219	482.8124	319	703.2746	419	923.7369	519	1144.1991	619	1364.6614	719	1585.1237	819	1805.5859	919	2026.0482
20	44.0925	120	264.5547	220	485.0170	320	705.4792	420	925.9415	520	1146.4038	620	1366.8660	720	1587.3283	820	1807.7906	920	2028.2528
21	46.2971	121	266.7593	221	487.2216	321	707.6839	421	928.1461	521	1148.6084	621	1369.0706	721	1589.5329	821	1809.9952	921	2030.4574
22	48.5017	122	268.9640	222	489.4262	322	709.8885	422	930.3507	522	1150.8130	622	1371.2753	722	1591.7375	822	1812.1998	922	2032.6621
23	50.7063	123	271.1686	223	491.6308	323	712.0931	423	932.5554	523	1153.0176	623	1373.4799	723	1593.9422	823	1814.4044	923	2034.8667
24	52.9109	124	273.3732	224	493.8355	324	714.2977	424	934.7600	524	1155.2223	624	1375.6845	724	1596.1468	824	1816.6090	924	2037.0713
25	55.1156	125	275.5778	225	496.0401	325	716.5024	425	936.9646	525	1157.4269	625	1377.8891	725	1598.3514	825	1818.8137	925	2039.2759
26	57.3202	126	277.7825	226	498.2447	326	718.7070	426	939.1692	526	1159.6315	626	1380.0938	726	1600.5560	826	1821.0183	926	2041.4805
27	59.5248	127	279.9871	227	500.4493	327	720.9116	427	941.3739	527	1161.8361	627	1382.2984	727	1602.7606	827	1823.2229	927	2043.6852
28	61.7294	128	282.1917	228	502.6540	328	723.1162	428	943.5785	528	1164.0407	628	1384.5030	728	1604.9653	828	1825.4275	829	2045.8898
29	63.9341	129	284.3963	229	504.8586	329	725.3208	429	945.7831	529	1166.2454	629	1386.7076	729	1607.1699	829	1827.6322	929	2048.0944
30	66.1387	130	286.6009	230	507.0632	330	727.5255	430	947.9877	530	1168.4500	630	1388.9123	730	1609.3745	830	1829.8368	930	2050.2990
31	68.3433	131	288.8056	231	509.2678	331	729.7301	431	950.1924	531	1170.6546	631	1391.1169	731	1611.5791	831	1832.0414	931	2052.5037
32	70.5479	132	291.0102	232	511.4724	332	731.9347	432	952.3970	532	1172.8592	632	1393.3215	732	1613.7838	832	1834.2460	932	2054.7083
33	72.7525	133	293.2148	233	513.6771	333	734.1393	433	954.6016	533	1175.0639	633	1395.5261	733	1615.9884	833	1836.4506	933	2056.9129
34	74.9572	134	295.4194	234	515.8817	334	736.3440	434	956.8062	534	1177.2685	634	1397.7307	734	1618.1930	834	1838.6553	934	2059.1175
35	77.1618	135	297.6241	235	518.0863	335	738.5486	435	959.0108	535	1179.4731	635	1399.9354	735	1620.3976	835	1840.8599	935	2061.3222
36	79.3664	136	299.8287	236	520.2909	336	740.7532	436	961.2155	536	1181.6777	636	1402.1400	736	1622.6022	836	1843.0645	936	2063.5268
37	81.5710	137	302.0333	237	522.4956	337	742.9578	437	963.4201	537	1183.8823	637	1404.3446	737	1624.8069	837	1845.2691	937	2065.7314
38	83.7757	138	304.2379	238	524.7002	338	745.1624	438	965.6247	538	1186.0870	638	1406.5492	738	1627.0115	838	1847.4738	938	2067.9360
39	85.9803	139	306.4425	239	526.9048	339	747.3671	439	967.8293	539	1188.2916	639	1408.7539	739	1629.2161	839	1849.6784	939	2070.1406
40	88.1849	140	308.6472	240	529.1094	340	749.5717	440	970.0340	540	1190.4962	640	1410.9585	740	1631.4207	840	1851.8830	940	2072.3453
41	90.3895	141	310.8518	241	531.3141	341	751.7763	441	972.2386	541	1192.7008	641	1413.1631	741	1633.6254	841	1854.0876	941	2074.5499
42	92.5942	142	313.0564	242	533.5187	342	753.9809	442	974.4432	542	1194.9055	642	1415.3677	742	1635.8300	842	1856.2922	942	2076.7545
43	94.7988	143	315.2610	243	535.7233	343	756.1856	443	976.6478	543	1197.1101	643	1417.5723	743	1638.0346	843	1858.4969	943	2078.9591
44	97.0034	144	317.4657	244	537.9279	344	758.3902	444	978.8524	544	1199.3147	644	1419.7770	744	1640.2392	844	1860.7015	944	2081.1638
45	99.2080	145	319.6703	245	540.1325	345	760.5948	445	981.0571	545	1201.5193	645	1421.9816	745	1642.4439	845	1862.9061	945	2083.3684
46	101.4126	146	321.8749	246	542.3372	346	762.7994	446	983.2617	546	1203.7240	646	1424.1862	746	1644.6485	846	1865.1107	946	2085.5730
47	103.6173	147	324.0795	247	544.5418	347	765.0040	447	985.4663	547	1205.9286	647	1426.3908	747	1646.8531	847	1867.3154	947	2087.7776
48	105.8219	148	326.2841	248	546.7464	348	767.2087	448	987.6709	548	1208.1332	648	1428.5955	748	1649.0577	848	1869.5200	948	2089.9822
49	108.0265	149	328.4888	249	548.9510	349	769.4133	449	989.8756	549	1210.3378	649	1430.8001	749	1651.2623	849	1871.7246	949	2092.1869

50	110.2311	150	330.6934	250	551.1557	350	771.6179	450	992.0802	550	1212.5424	650	1433.0047	750	1653.4670	850	1873.9292	950	2094.3915
51	112.4358	151	332.8980	251	553.3603	351	773.8225	451	994.2848	551	1214.7471	651	1435.2093	751	1655.6716	851	1876.1339	951	2096.5961
52	114.6404	152	335.1026	252	555.5649	352	776.0272	452	996.4894	552	1216.9517	652	1437.4139	752	1657.8762	852	1878.3385	952	2098.8007
53	116.8450	153	337.3073	253	557.7695	353	778.2318	453	998.6940	553	1219.1563	653	1439.6186	753	1660.0808	853	1880.5431	953	2101.0054
54	119.0496	154	339.5119	254	559.9741	354	780.4364	454	1000.8987	554	1221.3609	654	1441.8232	754	1662.2855	854	1882.7477	954	2103.2100
55	121.2542	155	341.7165	255	562.1788	355	782.6410	455	1003.1033	555	1223.5656	655	1444.0278	755	1664.4901	855	1884.9523	955	2105.4146
56	123.4589	156	343.9211	256	564.3834	356	784.8457	456	1005.3079	556	1225.7702	656	1446.2324	756	1666.6947	856	1887.1570	956	2107.6192
57	125.6635	157	346.1258	257	566.5880	357	787.0503	457	1007.5125	557	1227.9748	657	1448.4371	757	1668.8993	857	1889.3616	957	2109.8238
58	127.8681	158	348.3304	258	568.7926	358	789.2549	458	1009.7172	558	1230.1794	658	1450.6417	758	1671.1039	858	1891.5662	958	2112.0285
59	130.0727	159	350.5350	259	570.9973	359	791.4595	459	1011.9218	559	1232.3840	659	1452.8463	759	1673.3086	859	1893.7708	959	2114.2331
60	132.2774	160	352.7396	260	573.2019	360	793.6641	460	1014.1264	560	1234.5887	660	1455.0509	760	1675.5132	860	1895.9755	960	2116.4377
61	134.4820	161	354.9442	261	575.4065	361	795.8688	461	1016.3310	561	1236.7933	661	1457.2556	761	1677.7178	861	1898.1801	961	2118.6423
62	136.6866	162	357.1489	262	577.6111	362	798.0734	462	1018.5357	562	1238.9979	662	1459.4602	762	1679.9224	862	1900.3847	962	2120.8470
63	138.8912	163	359.3535	263	579.8157	363	800.2780	463	1020.7403	563	1241.2025	663	1461.6648	763	1682.1271	863	1902.5893	963	2123.0516
64	141.0958	164	361.5581	264	582.0204	364	802.4826	464	1022.9449	564	1243.4072	664	1463.8694	764	1684.3317	864	1904.7939	964	2125.2562
65	143.3005	154	363.7627	265	584.2250	365	804.6873	465	1025.1495	565	1245.6118	665	1466.0740	765	1686.5363	865	1906.9986	965	2127.4608
66	145.5051	166	365.9674	266	586.4296	366	806.8919	466	1027.3541	566	1247.8164	666	1468.2787	766	1688.7409	866	1909.2032	966	2129.6655
67	147.7097	167	368.1720	267	588.6342	367	809.0965	467	1029.5588	567	1250.0210	667	1470.4833	767	1690.9456	867	1911.4078	967	2131.8701
68	149.9143	168	370.3766	268	590.8389	368	811.3011	468	1031.7634	568	1252.2256	668	1472.6879	768	1693.1502	868	1913.6124	968	2134.0747
69	152.1190	169	372.5812	269	593.0435	369	813.5057	469	1033.9680	569	1254.4303	669	1474.8925	769	1695.3548	869	1915.8171	969	2136.2793
70	154.3236	170	374.7858	270	595.2481	370	815.7104	470	1036.1726	570	1256.6349	670	1477.0972	770	1697.5594	870	1918.0217	970	2138.4839
71	156.5282	171	376.9905	271	597.4527	371	817.9150	471	1038.3773	571	1258.8395	671	1479.3018	771	1699.7640	871	1920.2263	971	2140.6886
72	158.7328	172	379.1951	272	599.6574	372	820.1196	472	1040.5819	572	1261.0441	672	1481.5064	772	1701.9687	872	1922.4309	972	2142.8932
73	160.9375	173	381.3997	273	601.8620	373	822.3242	473	1042.7865	573	1263.2488	673	1483.7110	773	1704.1733	873	1924.6355	973	2145.0978
74	163.1421	174	383.6043	274	604.0666	374	824.5289	474	1044.9911	574	1265.4534	674	1485.9156	774	1706.3779	874	1926.8402	974	2147.3024
75	165.3467	175	385.8090	275	606.2712	375	826.7335	475	1047.1957	575	1267.6580	675	1488.1203	775	1708.5825	875	1929.0448	975	2149.5071
76	167.5513	176	388.0136	276	608.4758	376	828.9381	476	1049.4004	576	1269.8626	676	1490.3249	776	1710.7872	876	1931.2494	976	2151.7117
77	169.7559	177	390.2182	277	610.6805	377	831.1427	477	1051.6050	577	1272.0673	677	1492.5295	777	1712.9918	877	1933.4540	977	2153.9163
78	171.9606	178	392.4228	278	612.8851	378	833.3474	478	1053.8096	578	1274.2719	678	1494.7341	778	1715.1964	878	1935.6587	978	2156.1209
79	174.1652	179	394.6274	279	615.0897	379	835.5520	479	1056.0142	579	1276.4765	679	1496.9388	779	1717.4010	879	1937.8633	979	2158.3255
80	176.3698	180	396.8321	280	617.2943	380	837.7566	480	1058.2189	580	1278.6811	680	1499.1434	780	1719.6056	880	1940.0679	980	2160.5302
81	178.5744	181	399.0367	281	619.4990	381	839.9612	481	1060.4235	581	1280.8857	681	1501.3480	781	1721.8103	881	1942.2725	981	2162.7348
82	180.7791	182	401.2413	282	621.7036	382	842.1658	482	1062.6281	582	1283.0904	682	1503.5526	782	1724.0149	882	1944.4772	982	2164.9394
83	182.9837	183	403.4459	283	623.9082	383	844.3705	483	1064.8327	583	1285.2950	683	1505.7573	783	1726.2195	883	1946.6818	983	2167.1440
84	185.1883	184	405.6506	284	626.1128	384	846.5751	484	1067.0373	584	1287.4996	684	1507.9619	784	1728.4241	884	1948.8864	984	2169.3487
85	187.3929	185	407.8552	285	628.3174	385	848.7797	485	1069.2420	585	1289.7042	685	1510.1665	785	1730.6288	885	1951.0910	985	2171.5533
86	189.5975	186	410.0598	286	630.5221	386	850.9843	486	1071.4466	586	1291.9089	686	1512.3711	786	1732.8334	886	1953.2956	986	2173.7579
87	191.8022	187	412.2644	287	632.7267	387	853.1890	487	1073.6512	587	1294.1135	687	1514.5757	787	1735.0380	887	1955.5003	987	2175.9625
88	194.0068	188	414.4691	288	634.9313	388	855.3936	488	1075.8558	588	1296.3181	688	1516.7804	788	1737.2426	888	1957.7049	988	2178.1672
89	196.2114	189	416.6737	289	637.1359	389	857.5982	489	1078.0605	589	1298.5227	689	1518.9850	789	1739.4472	889	1959.9095	989	2180.3718
90	198.4160	190	418.8783	290	639.3406	390	859.8028	490	1080.2651	590	1300.7273	690	1521.1896	790	1741.6519	890	1962.1141	990	2182.5764
91	200.6207	191	421.0829	291	641.5452	391	862.0074	491	1082.4697	591	1302.9320	691	1523.3942	791	1743.8565	891	1964.3188	991	2184.7810
92	202.8253	192	423.2875	292	643.7498	392	864.2121	491	1084.6743	592	1305.1366	692	1525.5989	792	1746.0611	892	1966.5234	992	2186.9856
93	205.0299	193	425.4922	293	645.9544	393	866.4167	493	1086.8790	593	1307.3412	693	1527.8035	793	1748.2657	893	1968.7280	993	2189.1903
94	207.2345	194	427.6968	294	648.1591	394	868.6213	494	1089.0836	594	1309.5458	694	1530.0081	794	1750.4704	894	1970.9326	994	2191.3949
95	209.4391	195	429.9014	295	650.3637	395	870.8259	495	1091.2882	595	1311.7505	695	1532.2127	795	1752.6750	895	1973.1372	995	2193.5995
96	211.6438	196	432.1060	296	652.5683	396	873.0306	496	1093.4928	596	1313.9551	696	1534.4173	796	1754.8796	896	1975.3419	996	2195.8041
97	213.8484	197	434.3107	297	654.7729	397	875.2352	497	1095.6974	597	1316.1597	697	1536.6220	797	1757.0842	897	1977.5465	997	2198.0088
98	216.0530	198	436.5153	298	656.9775	398	877.4398	498	1097.9021	598	1318.3643	698	1538.8266	798	1759.2889	898	1979.7511	998	2200.2134
99	218.2576	199	438.7199	299	659.1822	399	879.6444	499	1100.1067	599	1320.5690	699	1541.0312	799	1761.4935	899	1981.9557	999	2202.4180

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